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ABSTRACT

The General Accounting Office (GAO) evaluated the Office of Economic Opportunity's (OEO) performance contracting experiment because of its potential impact in education. Performance contracting has been defined as an agreement between a local education agency, such as a public school, and a private educational firm, known as a learning system contractor. Payment to the contractor depends on student achievement. OEO initiated a major educational experiment over one school year in an effort to help poor children. The experiment was designed to assess the overall impact of remedial reading and mathematics programs conducted by private educational firms. A total of 27,000 students, 18 school districts, and 6 private educational firms were involved. It was found that the firms operating under performance contracts did not perform significantly better than the more traditional school systems. (Author/CK)

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REPORT TO THE CONGRESS

Evaluation Of The Office Of Economic Opportunity's Performance Contracting Experiment

B-130515

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

MAY 8, 1973

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-130515

To the President of the Senate and
the Speaker of the House of Representatives

This is our evaluation of the Office of Economic Opportunity's performance contracting experiment.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director, Office of Management and Budget; the Acting Director, Office of Economic Opportunity; and the Secretary of Health, Education, and Welfare.

Elmer B. Staats
Comptroller General
of the United States

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ABBREVIATIONS

GAO	General Accounting Office
OEO	Office of Economic Opportunity

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

EVALUATION OF THE OFFICE OF ECONOMIC OPPORTUNITY'S PERFORMANCE CONTRACTING EXPERIMENT B-130515

D I G E S T

WHY THE REVIEW WAS MADE

The General Accounting Office (GAO) evaluated the performance contracting experiment because of its potential impact in education and because it was the Office of Economic Opportunity's (OEO) first major experiment after its designation by the President as the primary research and development arm for the Nation's poor.

Background

"Performance contracting" has been defined as an agreement between a local education agency, such as a public school, and a private educational firm, known as a "learning-system contractor." Payment to the contractor is related to some measure of student achievement. In other words, the contractor is paid on the basis of its success in raising the grade levels of students it instructs. Performance contracting is not a program but a method of organizing programs.

Prompted by the initial reports of success of the first performance contracting project, OEO initiated a major educational experiment in a conscientious effort to help poor children because of its belief that education was crucial to breaking the poverty cycle and to provide useful information to the many school districts which were considering such projects.

The OEO experiment, conducted during the 1970-71 school year at an estimated cost of $6 million, was designed to assess the overall impact of remedial reading and mathematics programs conducted by private educational firms. These programs were carried out under performance contracts for students from low-income families performing well below average in the subjects relative to national norms.

The experiment included approximately 27,000 students, 18 school districts, 6 private educational firms, a management support contractor, a test and analysis contractor, and a payment computations contractor. (See app. II.)

The President's fiscal year 1974 budget contains no direct appropriation to OEO and provides for the transfer of certain OEO programs to other Federal agencies. Funds will be provided in the fiscal year 1974 budgets of these Federal agencies for continuing these programs.

FINDINGS AND CONCLUSIONS

Was performance contracting more successful than traditional classroom instruction in improving the reading and mathematics skills of poor children? The answer according to OEO is no! OEO's report released in June 1972 stated that

"The results of the experiment clearly indicate that the firms operating under performance contracts did not perform significantly better than the more traditional school systems."

Because of a number of shortcomings in both the design and implementation of the experiment, GAO believes that the question as to the merits of performance contracting versus traditional educational methods remains unanswered. (See p. 13.)

While the OEO experiment in performance contracting was initially designed to make a reasonable comparison between educational performance contracting and traditional classroom instruction, GAO believes the information obtained from the experiment did not provide a basis for making a reliable comparison. (See p. 14.)

Comparison of experimental and control groups

Although there were 6 unique experimental instructional programs involved in the 18 school districts, OEO's overall conclusion concerning the merits of the instructional programs of the educational firms was based on its comparative analysis of achievement results between experimental and control groups aggregated for all 18 school districts. (See p. 14.)

OEO intended to compare the individual experimental instructional programs with the traditional school programs by analyzing student achievement results on a school-district-by-school-district basis. As a result, OEO reported that there were some successes and failures among individual school districts, at least in certain grades and subjects.

OEO cautioned that these individual school district results are less reliable than the aggregate results because of (1) smaller sample size, (2) apparently extraordinarily large or small gains of control groups, and (3) unknown effects of less than ideal testing conditions at some school districts. (See p. 14.)

OEO designed the experiment to include students in the experimental and control groups who were comparable in terms of initial achievement levels and socioeconomic characteristics, such as race and family income. OEO's student selection procedures resulted in a majority of the experimental and control groups not being comparable in terms of initial achievement levels or race and family income. As a result, OEO's comparison of student achievement results on an aggregate basis may not reliably indicate the relative effectiveness of the educational firms' instructional programs. (See p. 15.)

Control groups not monitored

Although OEO attempted to maintain controls over experimental instructional programs conducted by the six educational firms, there were no indications that such controls were ever contemplated for educational programs of the control schools. As a result, there was no assurance that achievement results reported for control schools represent the typical results in those schools and serve as a valid basis for comparison to achievement gains of experimental schools. (See pp. 19 to 20.)

Length of instructional periods not coordinated

Neither OEO nor its management support contractor sought to control the amount of class time for both experimental and control students. Large differences in instructional period length occurred which could have affected ultimate achievement results of the experiment. Questions concerning achievement gains exist because instructional time--an important factor affecting student achievement--was not uniform. (See pp. 20 to 22.)

Information on significant experimental factors not collected

Although one of the primary reasons OEO selected the six educational firms was that each offered a different instructional approach to helping academically deficient students, the firms continuously modified their instructional approaches during the school year. No one firm had exactly the same instructional materials at all three of its school districts. These factors obscured information on the relative effectiveness of the diversified instructional approaches originally sought by OEO and added to the confusion as to the primary source of achievement differences resulting from the experiment. (See pp. 22 and 23.)

Lack of operational preparedness

OEO's evaluation and report on the results of its experiment indicated that lack of operational preparedness did not significantly affect the results. GAO believes, however, that this shortcoming did, in fact, adversely affect the experimental outcome. (See p. 25.)

The educational firms were hampered by unfamiliarity of some of their project administrators with the firms' instructional programs and by absence of curriculum materials during teachers training sessions and at the start of school. The majority of the firms' project administrators and teachers were hired specifically for this project and were therefore inexperienced in the use of the firms' instructional approaches. (See pp. 26 and 27.)

The short time available during selection of school districts forced many districts to agree to participate without full knowledge of all the implications. Since negotiations took place during the summer, most school personnel did not know they would be involved until school opened and this caused many to view the project with apprehension. Personnel in several school districts were openly critical of and hostile toward the educational firms during the school year. (See pp. 27 and 28.)

The test and analysis contractor was selected with less than 2 weeks remaining prior to the start of the school year in several school districts and, as a result, was not adequately prepared to test about 27,000 students. (See pp. 29 and 30.)

Because of insufficient time, OEO apparently did not adequately explore the feasibility of the cost-effectiveness measure proposed by the management support contractor before contractually agreeing to its proposal. Later the proposed measure was found to be infeasible because necessary cost data was not available from some school districts and educational firms to make cost-effectiveness comparisons. Costs incurred to obtain information

significantly exceeded the contractor's estimate because the cost data was not readily available in the other school districts. Results of the exercise were of little value because program costs were not related to student achievement as planned. (See pp. 30 to 33.)

Test administration

Although test publishers stressed that standardized test conditions were needed and specified other requirements to achieve valid results, they did not provide information concerning the effects that poor testing conditions would have on test scores.

OEO and the test and analysis contractor recognized that poor testing conditions encountered for certain grade groups and schools could have introduced a bias to their analysis of the experimental instructional programs' impact, particularly at the school district level. (See pp. 34 to 41.)

The requirement for interim performance objective tests was impracticable because conditions necessary to insure reliable results could not be met within the limited time before the tests were given. As a result, the tests were virtually useless for evaluation and questionable as a basis for paying the firms. (See pp. 41 to 43.)

Contract administration

OEO's procedures in soliciting and evaluating proposals and in awarding contracts generally did not result in effective procurement. OEO evaluated the proposals of the educational firms using criteria other than that specified in the request for proposals, in violation of the Federal Procurement Regulations.

Although the OEO contracting officer made a determination that the six educational firms selected were financially responsible, at least two firms, in GAO's opinion, did not meet the conditions necessary to make such a determination. (See pp. 44 to 59.)

Payments to the educational firms

Final payments to the three educational firms that had settled with OEO as of March 28, 1973, bore little, if any, relationship to the achievement of students they instructed although this was to be the crux of the performance contracting concept. (See pp. 60 and 69.)

On the basis of actual student achievement as measured by pretests and posttests, the educational firms earned an average of only 33 percent of the total possible. OEO subsequently made a number of adjustments which significantly increased proposed payments to the firms. (See p. 63.)

The most significant increases resulted when OEO (1) reimbursed all firms for so-called lost instructional time--about $845,000--and (2) dropped the incentive provisions of the contracts in favor of cost reimbursement for all grades in one school district and for three grades in another school district--about $172,000. (See p. 60.)

GAO believes that OEO's adjustments in many cases go beyond the original language and intent of the

contracts. (See p. 60.) In making adjustments to the educational firms' earnings, OEO recognized that conditions under which the firms conducted their instructional programs differed significantly among school districts and firms. In some instances, conditions had a detrimental effect on the firms' ability to perform; that is, to instruct the students and thereby raise their achievement levels. (See p. 60.)

GAO believes that any conditions which adversely affected performance of the educational firms may have also adversely affected the reliability of the results of the comparison between experimental and control programs. (See p. 60.)

RECOMMENDATIONS AND SUGGESTIONS

OEO's research and development activities in education will be transferred to the National Institute of Education, Department of Health, Education, and Welfare. Observations contained in this report are expected to be of value to the Institute and local educational authorities if similar experiments are conducted in the future.

AGENCY ACTIONS AND UNRESOLVED ISSUES

OEO stated that its final report in June 1972 contained a comprehensive analysis of the results of the experiment and that many of the problems pointed out in GAO's report were appropriately noted in its report. OEO believes that its report provides a useful perspective within which the overall performance contracting experiment may be judged.

MATTERS FOR CONSIDERATION BY THE CONGRESS

The Federal Government spends about $6.5 billion annually for educational programs. Congress has expressed concern as to whether the Federal expenditures have resulted in improved educational effectiveness. A number of educational experiments, including OEO's performance contracting experiment, have been directed at testing and developing more effective educational programs. The Congress should find this report useful in its consideration of legislation involving Federal educational programs.

CHAPTER 1

INTRODUCTION

Under authority of section 232(a) of the Economic Opportunity Act of 1964, as amended, the Office of Economic Opportunity conducted an educational experiment under performance contracting during the 1970-71 school year at an estimated cost of about $6 million. OEO initiated this major educational experiment in a conscientious effort to help poor children because of its belief that education was crucial to breaking the poverty cycle and to provide useful information to the many school districts which were considering such projects. The experiment was designed to assess the overall impact of private educational firms' remedial reading and mathematics programs upon students who were performing well below average in these subjects.

On February 23, 1973, we submitted a draft of this report to the Director, OEO, for review and comment. OEO comments, which were received by letter dated April 6, 1973, are included as appendix I and, where pertinent, are incorporated in the applicable sections of this report. Segments of the draft report applicable to the educational firms, the management support contractor, and the test and analysis contractor were also sent to them for review and comment. As of April 2, 1973, written comments had been received from three educational firms and the two contractors. Their comments were considered in the preparation of this report.

PERFORMANCE CONTRACTING IN EDUCATION

"Performance contracting" has been roughly defined as a covenant between a local education agency, such as a public school, and a learning-system contractor (a private educational firm) in which payment to the contractor is related to some measure of the achievement of the students in the learning program. In other words, the contractor is paid on the basis of its success in raising the grade levels of the students it instructs. Performance contracting is not a program but a method for organizing programs.

Although the performance-contracting concept dates as far back as 1862, its first application in the education of public school students in the United States was in late 1969. During the fall of 1969 it was introduced in the Portland, Oregon, and the Texarkana, Arkansas, school systems.

The Portland public school system experimented with five very small, locally financed programs during the second half of the 1969-70 school year and the 1970 summer session. Little publicity had been given these programs and no results were available prior to the OEO experiment.

The Texarkana school system initiated an experimental program during the 1969-70 school year directed toward reducing student dropouts. This program was funded primarily by the Department of Health, Education, and Welfare. The private educational firm conducting the program was to be paid on the basis of its success in raising student achievement levels above a minimum guaranteed level of one grade. Although initial reports on the results of the program in early 1970 indicated success, the results were later determined questionable when it was learned that the firm was "teaching to the tests."

STRUCTURE OF EXPERIMENT

The OEO experiment included 18 school districts, 6 private educational firms, a management support contractor, a test and analysis contractor, and a payment computations contractor. Each school district had a cost-no-fee contract with OEO. The six private educational firms were each assigned three school districts by OEO. Although fixed-price incentive contracts were signed between the firms and their assigned school districts, the major contract provisions were negotiated between OEO and the firms. The firms were to be paid on the basis of their success in raising the mathematics and reading grade levels of the students they instructed.

OEO initially estimated that the maximum cost for the experiment would be $6.7 million. As of December 13, 1972, the estimate was about $6 million, as follows:

Contractors	Initial contract estimates	Estimated final cost
School districts (18)	$1,186,000	$1,193,000
Educational firms (6)	4,371,000	3,099,000
Management support contractor	526,000	547,000
Test and analysis contractor	614,000	1,082,000
Payment computations contractor	13,000	26,000
	$6,710,000	$5,947,000

Appendix II lists in detail initial contract estimates and proposed or final payments.

The school districts OEO selected were considered to have a high concentration of children from low-income families who were performing below grade level in reading and mathematics and were a reasonable representation of geographic locations, urban and rural settings, and ethnic backgrounds. Each educational firm was to employ a separate instructional approach or technique. Three school districts, each with from 450 to 600 students below grade level in reading and mathematics, were assigned to each educational firm.

The experiment was to include approximately 27,000 students from grades 1, 2, 3, 7, 8, and 9 who were classified into four groups--experimental, control, comparison, and special program groups. The educational firms instructed the experimental groups in mathematics and reading. The control groups were to be in the same school districts but not in the same schools as the experimental students. These groups were to be comparable in grade-level decrements and socioeconomic factors such as race and family income. A comparison of student achievement between the experimental and control groups was to provide the primary measure of each programs' effectiveness.

The comparison groups were in the same schools and classes as the experimental students except for the mathematics and reading classes. A comparative analysis between the experimental and comparison groups was to indicate any possible rub-off effect of the experimental programs on the comparison group. The special program groups participated in two other remedial mathematics and reading programs not sponsored by OEO. A comparative analysis between the experimental and special program groups was to indicate the relative effectiveness of other remedial education programs.

The management support contractor was to help OEO plan the experiment's design, select participants, and develop and monitor onsite reporting procedures and to technically assist the school districts. OEO's contract with the management support contractor provided for payment on a cost-plus-a-fixed-fee basis. The test and analysis contractor was to test the students and independently evaluate the results of the experiment for OEO under a cost-plus-a-fixed-fee contract. The payment computations contractor was to compute final

payments to the educational firms based on student achievement under a fixed-price contract with OEO.

The primary measure of program impact was to be based on student achievement as measured by standardized nationally normed[1] pretests and posttests. However, other information concerning the students, such as attitudes of students and parents toward the experiment; characteristics, training, and attitudes of instructional staff; and attitudes of school district decisionmaking staffs, was to be collected and analyzed to help explain the overall impact of the experiment. OEO intended that, at the end of the experiment, it would be able to discuss the impacts of the experimental instructional programs at any given school district, for any given program, for each type of student, and for all students in the experiment.

HOW WERE PAYMENTS BASED ON STUDENT ACHIEVEMENT TO BE COMPUTED?

Student achievement, as measured by standardized nationally normed pretests and posttests, was to serve as the basis for computing a maximum of 75 percent of the amount which the firms could earn under their contracts. The remaining 25 percent was to be based on the results of five interim performance objective tests which were to be administered to the experimental groups during the school year.

Payment based on pretests and posttests

Each firm guaranteed a minimum grade level increase for each subject in each grade. The firms established a base dollar amount to be recovered only for each student who achieved the minimum guaranteed grade level increase. For each 0.1 grade level increase achieved by a student above the guaranteed minimum, the firm would recover a set unit dollar amount in addition to the base amount.

To illustrate, firm E has a fixed-price incentive contract for $252,000 with a school district. The maximum amount, 75 percent, that could be recovered on gains in grade level

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[1]The test publisher establishes a standard of achievement based on test results of a sample of students representative of all students in a particular grade throughout the country.

achievement as measured by the pretests and posttests was $189,000. Firm E guaranteed a minimum 1.5 grade level increase for students in the secondary grades. The base amount to be recovered for students achieving this increase was $82.50 per subject per student. For each 0.1 grade level increase above the minimum in each subject, the firm was to recover $15 per student. Following are several examples of what the firm could recover on student achievement.

Example 1

Student scored a gain of 1.0 in reading and 0.8 in mathematics. There was no payment; the firm had guaranteed a 1.5 increase in both subjects.

Example 2

Student scored gains of 1.5 in reading and 1.4 in mathematics. Payment to the firm on this student is $82.50, computed as follows:

	Student gain	Unit gain above 1.5	Base payment	Payment for increase above minimum ($15 per 0.1)	Total
Reading	1.5	-	$82.50	-	$82.50
Mathematics	1.4	-	-	-	-
					$82.50

Example 3

Student scored gains of 2.0 in reading and 1.8 in mathematics. Payment to the firm on this student is $285, computed as follows:

	Student gain	Unit gain above 1.5	Base payment	Payment for increase above minimum ($15 per 0.1)	Total
Reading	2.0	.5	$82.50	$75	$157.50
Mathematics	1.8	.3	$82.50	$45	127.50
					$285.00

The minimum grade level guarantee varied among the firms and ranged from 0.5 in certain elementary grades to 1.5 in grades 7, 8, and 9. Four firms varied their minimum grade level guarantees between the elementary grades and grades 7, 8, and 9, and two firms guaranteed a minimum of 1.0 grade level gains for all grades.

Payment based on interim performance objective tests

The firms could recover up to 25 percent of the contract amount on the basis of the students' attaining a passing grade of 75 percent or more on each of the five interim performance objective tests for both reading and mathematics. Each firm established a unit amount that could be earned per student in each subject. For example, one firm established a unit amount of $52.50 per student in each subject if the student passed all five tests, or $10.50 for each test passed.

CHAPTER 2

RESULTS OF PERFORMANCE CONTRACTING EXPERIMENT

Was performance contracting more successful than traditional classroom instruction in improving the reading and mathematics skills of poor children? The answer according to OEO is no! OEO's report released in June 1972 stated:

> "The results of the experiment clearly indicate that the firms operating under performance contracts did not perform significantly better than the more traditional school systems.
>
> * * * * *
>
> Thus while we judge this experiment to be a success in terms of the information it can offer about the capabilities of performance contractors, it is clearly another failure in our search for means of helping poor and disadvantaged youngsters to develop the skills they need to lift themselves out of poverty."

Because of a number of shortcomings in both the design and implementation of the experiment, it is our opinion that the question as to the merits of performance contracting versus traditional educational methods remains unanswered. These shortcomings include:

- --The experimental and control groups were not comparable in initial achievement levels and socio-economic characteristics, such as race and family income.
- --OEO's design did not provide for monitoring control groups.
- --OEO's design did not call for coordinating the length of class instructional periods.
- --OEO gathered little information on the overall effects of the experiment other than student achievement tests.

--A lack of operational preparedness due to insufficient leadtime to plan and implement the experiment adversely affected the experimental outcome.

The experiment was initially designed to permit a reasonable comparison between performance contracting and traditional classroom instruction. However, the above shortcomings in implementation, when combined with design problems, resulted in the lack of information to provide a basis for arriving at a statistically reliable overall conclusion or to explain the reasons for the success or failure of an experimental program at any given school district.

BASIS FOR CONCLUSIONS

Comparison of experimental and control groups

Although there were 6 unique experimental instructional programs involved in the 18 school districts, OEO's overall conclusion concerning the merits of the instructional programs of the educational firms was based on its comparative analysis of achievement results between experimental and control groups aggregated for all 18 school districts. OEO intended to compare the individual experimental instructional programs with the traditional school programs by analyzing student achievement results on a school-district-by-school-district basis. As a result of these analyses, OEO reported that there were some successes and failures among individual school districts, at least in certain grades and subjects. OEO cautioned, however, that results from individual school districts are less reliable than the aggregate results because of (1) the smaller sample size, (2) the apparently extraordinarily large or small gains of control groups, and (3) the unknown effects of less than ideal testing conditions at certain school districts.

A random assignment of schools as experimental and control within the participating school districts and a random selection of students within these schools was to be made by OEO in order to minimize the analytical problems which would result from noncomparable experimental and control group students. Random selection is the most desirable method of selection in order to achieve initial comparability of groups and to reduce the possibility of extraneous source explanations for experimental effects. OEO, however, selected the

most deficient schools within the school districts as experimental and attempted to select for control purposes those schools which most closely matched the experimental schools. The most academically deficient students were then assigned to fill the experimental and control groups within their respective schools.

Consequently, although OEO designed the experiment to include students in the experimental and control groups who were comparable in terms of initial achievement levels and socioeconomic characteristics, OEO's student selection procedures resulted in a majority of the experimental and control groups not being comparable in terms of initial achievement levels and socioeconomic characteristics. As a result, the comparison made by OEO of student achievement results on an aggregate basis between the experimental and control groups may not reliably indicate the relative effectiveness of the educational firms' instructional programs.

The significance of this initial mismatch is twofold.

1. Previous educational research has shown that groups starting at different educational achievement levels would be expected to experience different rates of growth. Therefore, the unadjusted student achievement rates would tend to be biased in favor of the group of students having the higher initial achievement levels.

2. There is no known statistical procedure which can reliably adjust the student achievement results to eliminate the bias resulting from the mismatch in initial educational achievement levels.

As shown in the table below, the results of the mathematics and reading pretests disclosed that the majority of experimental and control group students at the 18 school districts were noncomparable in terms of initial achievement levels.

	Comparison of Pretest Scores for the 18 School Districts			
	No difference	Experimental greater	Control greater	Total
Reading:				
Grade:				
1	6	1	10	[a]17
2	3	4	11	18
3	7	2	9	18
7	8	1	9	18
8	4	1	13	18
9	6	-	11	[a]17
	34	9	63	106
Mathematics:				
Grade:				
1	6	2	9	[a]17
2	9	1	8	18
3	7	1	10	18
7	6	3	9	18
8	5	1	12	18
9	8	1	8	[a]17
	41	9	56	106
Total	75	18	119	212

[a]Insufficient test data available from pretests to make any comparison for one school district.

As shown above the control group students had greater pretest scores in mathematics and reading in 119 of 212 instances, or 56 percent, and the experimental group students had greater pretest scores in 18 instances, or 8 percent. Consequently, a total of 64 percent of experimental and control groups were mismatched and therefore would be expected to experience different rates of achievement.

Even when the students' pretest scores are aggregated for the 18 school districts, the comparison shows that the initial achievement levels of the control group students were higher and the difference in achievement levels increased with each succeeding grade, as shown in the following table:

Mean Pretest Grade Equivalent Scores
Aggregated Across All 18 School Districts

	Reading			Mathematics		
Grade	Experimental	Control	Difference	Experimental	Control	Difference
1	(a)	(a)	-	(a)	(a)	-
2	1.5	1.6	.1	1.4	1.4	.0
3	2.1	2.3	.2	2.2	2.3	.1
7	4.5	5.0	.5	4.7	5.1	.4
8	4.8	5.6	.8	5.4	5.9	.5
9	5.6	6.4	.8	6.0	6.6	.6

[a]The test used for grade 1 does not convert to grade level equivalents.

OEO also attempted to select experimental and control schools that were matched in socioeconomic characteristics, such as race. The test and analysis contractor's final report to OEO showed that the racial compositions of the control groups differed from those of the experimental groups in seven school districts and in four the racial compositions were unknown.

OEO extensively analyzed the results both on a school-district-by-school-district basis and on an aggregate basis. OEO used complex statistical procedures in an attempt to correct for the initial mismatch, but concluded that the unadjusted student achievement results were "* * * as unbiased as any of the more complex approaches." Although OEO reported that there were some successes and failures at individual school districts, it questioned the reliability of these results because of the smaller sample size, the apparently extraordinarily large or small gains of control groups, and the unknown effect of less than ideal testing conditions at certain school districts.

Therefore the primary basis for OEO's conclusion that there was no significant difference in the performance of experimental and control group students was its aggregate analyses of unadjusted student test scores.

OEO reported the following gains in grade level equivalents.

Differences in Grade Level Equivalent Gains of Experimental and Control Groups

	Experimental group gain	Control group gain	Difference
Reading:			
Grade:			
1	(a)	(a)	(a)
2	.4	0.5	-.1
3	.3	0.2	+.1
7	.4	0.3	+.1
8	.9	1.0	-.1
9	.8	0.8	-
Mathematics:			
Grade:			
1	(a)	(a)	(a)
2	.5	0.5	-
3	.4	0.4	-
7	.6	0.6	-
8	.8	1.0	-.2
9	.8	0.8	-

[a]A readiness test, rather than an achievement test, was used as the first-grade pretest. There is no grade equivalent for the readiness test.

OEO also analyzed and reported the aggregate results of the experiment in terms of raw numerical test scores. In 4 of the 12 grade and subject combinations, the differences between the gains of the experimental and control groups were statistically significant. Nevertheless, OEO concluded that the statistical differences were not educationally significant when converted to grade level equivalents since none exceeded a 0.5 grade level gain difference, a standard OEO believed was an appropriate measure of educational significance.

From the grade equivalent results, one can conclude that there was no significant difference between the educational system of the private firms and of the traditional school system. However, analyzing results in this aggregate manner does not provide information regarding the success or failure of each firm nor does it provide any insight into whether

performance contracting works better in some circumstances than others. Moreover, since these results are based on unadjusted test scores, they tend to be biased against the experimental groups because of the mismatch in initial achievement level.

Control groups not monitored

Although OEO attempted to maintain controls over the operations of the experimental instructional programs conducted by the six educational firms, there were no indications that such controls were ever contemplated for the operations of the educational programs of the control schools. Consequently, the experiment did not provide assurances that the control schools used traditional instructional methods nor were safeguards instituted to preclude teachers in control schools from inflating achievement gains by teaching to the tests or otherwise changing the traditional instructional program. For example, the management support contractor reported that the control school in one school district had a special education program for its deficient students. As a result, there was no assurance that the achievement results reported for control schools represent the typical results to be expected in those schools and serve as a valid basis for comparison to achievement gains of experimental schools.

OEO's management support contractor reviewed and monitored the activities of the educational firms to insure that the firms did not use curriculum items in their programs that could be considered directly related to items to be included on the achievement tests. However, similar precautions were not taken for control schools. The only information systematically collected on control schools related to time spent in various activities by the instructional staff.

A number of speculations resulted from a lack of knowledge as to what was occuring at the control schools as indicated by the following comments from OEO's report on the overall results of the experiment:

> "* * * careful inspection of the site-by-site results suggests that at some sites, experimental-control differences might have resulted from extraordinarily large or small gains of the control rather than the experimental group."

* * * * *

"A comparison * * * enables us to identify the cases where large positive or negative experimental-control differences may be a result of abnormally small or large gains on the part of the local control group or site measurement error for the control students. We stress the word "may" because a gain score at a particular site which appears to be abnormally large or small in relation to the average gain score across all sites may not be abnormally large or small for that particular site. Since we do not have the data to ascertain the degree to which "normal" gains vary from site to site, cases where there are differences between the pooled and unpooled adjusted mean gain differences are difficult to interpret."

* * * * *

"Thus abnormally large or small control gains may also be obscuring a few cases of relatively good or bad performances of a contractor."

* * * * *

"* * * some of the largest apparent winners or losers may be artificially inflated because of either control student volatility or control measurement error problems."

* * * * *

"There were some successes and failures among the individual sites, at least in certain grades and subjects, but even many of these are statistically quite unreliable - possibly caused by the volatility of the control students or site-wide testing difficulties." (Underscoring supplied.)

Length of instructional periods not coordinated

Neither OEO nor its management support contractor sought to control the amount of class time for both experimental and control students. Large differences in the length of instructional periods occurred which could have affected

the ultimate achievement results of the experiment. Also times available to the firms were not the same in all school districts. Questions concerning achievement gains exist because instructional time--an important factor affecting student achievement--was not uniform.

Though OEO did not consider the length of daily class periods significant, research findings indicate that a relationship between achievement and the length of a class period does exist.

Research, in general, indicates:

--Children in primary grades do poorer with longer class periods because of eye fatigue and shorter attention spans.

--Children at the secondary level do better with longer class periods.

--Longer class periods are better for the study of mathematics than for reading.

--Difference in length of class periods of from 10 to 30 minutes can produce achievement differences for certain target groups and subjects.

The amount of divergence in class instructional time is indicated by the following information in the management support contractor's final report to OEO on 10 school districts. The report did not include class instructional times for the remaining eight districts.

	Number of class hours			
	Reading		Mathematics	
	Experimental	Control	Experimental	Control
Grades 1 through 3:				
School district:				
1	1.156	1.050	1.156	0.667
2	1.500	2.000	0.500	1.083
3	0.750	1.700	0.750	0.927
4	1.000	1.083	1.000	0.750
5	0.920	1.100	0.920	0.833

	Number of class hours			
	Reading		Mathematics	
	Experimental	Control	Experimental	Control
Grades 1 through 3:				
School district:				
6	0.750	2.000	0.750	1.000
7	1.000	1.546	1.000	1.028
8	0.917	1.917	0.917	0.667
9	0.694	1.000	0.722	1.520
10	1.000	1.500	1.000	1.000
Grades 7 through 9:				
School district:				
1	0.806	0.917	0.806	0.917
2	0.917	0.917	0.917	0.917
3	1.000	0.717	1.000	0.717
4	0.830	0.833	0.840	0.833
5	0.750	0.833	0.750	0.833
6	0.750	1.000	0.750	1.000
7	1.000	0.917	1.000	0.917
8	0.917	0.726	0.917	0.726
9	0.917	0.889	0.917	0.889
10	0.786	0.750	0.786	0.750

Only school district 2 had instructional periods for experimental and control groups that were exactly the same but only for grades 7 through 9. However, class times for several other districts were, for all practical purposes, equivalent for both experimental and control groups. The general trend, however, was a divergence in time between experimental and control groups with some control classes having more than twice as much time as experimental classes.

Information on significant experimental factors not collected

Although one of the primary reasons OEO selected the six educational firms was that each offered a different instructional approach to helping academically deficient students, the firms continuously modified their instructional approaches during the school year. The school districts' project directors reported to OEO that, after the programs had been implemented and had been operating, some firms found

it necessary to modify their programs and that they often changed materials and supplies.

The project directors emphasized that, as the programs progressed, it appeared that each firm did not have an individual or a unique curriculum and that almost all firms used similar core materials. Moreover, no one firm had exactly the same instructional materials at all three of its school districts. These factors obscured information on the relative effectiveness of the diversified instructional approaches originally sought by OEO and added to the confusion as to the primary source of achievement differences resulting from the experiment.

OEO also initially planned to document a number of other major interest factors as part of its overall analysis of the impact of the experimental programs. These factors included student scores on payment tests, interim performance objective test scores, report card grades in other subjects, and changes in the attitudes of parents and school decision-makers.

The test and analysis contractor was also to interview approximately 50 ninth grade students in the experimental groups, 50 in the control groups, and 50 in the comparison groups at each school district. The interviews were to be made at the end of the school year and were to assess attitudes toward school, perceptions of schools and teachers, feelings toward the experimental program, etc. These interviews, however, were not conducted because OEO dropped the requirement.

Changes in parental attitudes were to be measured by questionnaires filled out by parents at both the beginning and end of the school year. The first questionnaire was to include questions related to socioeconomic data to be used for insuring a close analytical match between experimental, comparison, and control groups, and the second questionnaire was to omit the socioeconomic questions.

OEO was unable to assess the changes in parental attitudes because only one questionnaire was sent to parents during the school year. OEO dropped most of the requirements for collecting and analyzing the remaining information during the school year for a number of reasons, not the least of which were the cost overruns.

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In our opinion, the usefulness of the comparative achievement results was impaired also by the general lack of operational preparedness of the various contractors and the less than ideal testing conditions in certain grades and groups. These two factors are discussed in detail in the following chapters.

CHAPTER 3

LACK OF OPERATIONAL PREPAREDNESS DUE TO INSUFFICIENT TIME TO PLAN AND IMPLEMENT EXPERIMENT

OEO's evaluation of and report on the results of its experiment indicated that the lack of operational preparedness did not significantly affect the results. We believe, however, that this shortcoming did, in fact, adversely affect the experimental outcome.

The test and analysis and management support contractors, the 6 educational firms, and the project directors at the 18 school districts all expressed the opinion that the experiment was hampered by insufficient startup time. As a result of the short startup time, a great deal of confusion and disenchantment with the experimental education programs was evidenced. Neither the school districts, the test and analysis contractor, nor the educational firms were adequately prepared to begin their tasks within the extremely limited time available or to cope with the ensuing problems they encountered.

The test analysis contractor was selected with only about 2 weeks remaining prior to the start of the school year in many school districts and, as a result, was not adequately prepared to test about 27,000 students.

Further, because of insufficient time, OEO apparently did not explore the feasibility of the cost-effectiveness measure proposed by the management support contractor prior to contractually agreeing to its proposal. Later the proposed measure was found to be infeasible because the necessary cost data was not available from some school districts and firms to make cost-effectiveness comparisons. In addition, the costs incurred to obtain the information significantly exceeded the contractor's estimate because the cost data was not readily available in the remaining school districts. The results of these efforts were of little value because program costs were not related to student achievement as planned.

EDUCATIONAL FIRMS

Four firms stated in a joint paper to OEO that:

> " * * * from its inception, elements of the experiment were so poorly conceived and conducted * * * that these deficiencies should raise serious questions within the educational community on the broad generalized conclusions released by OEO. * * * It is conservatively estimated that the first 4 months were devoted to reaching the normal September status for experimental students."

Project directors in the 18 school districts reported to OEO that the short leadtime adversely affected the experimental instructional programs. They reported also that the preservice training of project staffs was hampered by the unfamiliarity of some educational firms' project administrators with the instructional program and by the absence of most materials and equipment to be used during the training workshop. The project directors stated that "all of these problems center around a lack of sufficient time."

The majority of the firms' project administrators and teachers were hired specifically for this experiment and were therefore inexperienced in the use of the firms' instructional approaches. The project directors reported that one of the major deterrents to the educational firms' being prepared to implement their programs at the start of the school year at various school districts was the ill timing in hiring project administrators. Though some were employed prior to negotiating and finalizing subcontracts, others were not employed until a few days before the start of school or after the project had been implemented. This delay primarily caused the inadequate preservice training given to educational firm personnel.

Preservice training for educational firm personnel ranged from 3 days to 2 weeks, depending on the firm and school district. Even at the school districts for which a greater number of training days were available, the project directors stated that the effectiveness of training was severely hampered by the lack of materials to be used for demonstration and practice. The educational firms' full complement of instructional materials or equipment was not

at the sites at the start of the school year for at least 9 of the 18 school districts. At one school district, for example, the management support contractor reported teachers to be "scrounging" materials from the school district.

SCHOOL DISTRICTS

OEO selected the 18 school districts between May 26, 1970, and June 19, 1970. The school districts were given 3 days to complete questionnaires which served as the basis for selection. At a 1-day conference between OEO and representatives of the school districts, the school districts and educational firms were matched, the intent and structure of the experiment was explained, major contract provisions were agreed upon, requirements for managing the experiment at the local level were determined, and each district's administrative costs were determined. Since these events all took place within a space of about 3-1/2 weeks when most schools are in recess for summer vacation, the school districts had little or no time in which to solicit support from school principals, teachers, parents, or local unions or associations.

After the experiment the project directors reported to OEO that the short time available during the school district selection process forced many school districts to make a "go-no go" decision without full knowledge of all the implications. The project directors stated that the planning and implementation problems associated with the short leadtime caused many teachers and local school administrators to view the project with apprehension. An official of the management support contractor informed us that the school personnel's initial impression of the experimental programs was bad because of insufficient startup time and that this impression persisted throughout the school year.

Teacher strikes hampered the experimental projects at four school districts, and four others were under considerable pressure from teachers' unions and school officials opposed to the experimental programs. This opposition had a detrimental effect on the experimental program operations at these school districts and resulted, in part, because the school districts did not have sufficient leadtime to conduct an effective community relations program, especially at the outset of the school year.

The test and analysis contractor's pretest monitors reported that school principals and/or teachers at 8 school districts were not adequately informed of the purpose or intent of the experimental programs and that at 2 of these school districts even the project directors did not fully understand program requirements. For example, the project director at one school district was not aware of the requirement for testing comparison group students at the time the test monitor arrived on the site to begin pretesting.

Many of the school districts which experienced one or more of these difficulties also reported instances in which teachers and school officials questioned the effectiveness of the project; teachers were frustrated and morale was low; and parents either refused to allow their children to participate in the project or requested that those already enrolled be removed, which reduced the number of experimental group students. At least two school districts threatened to withdraw from the contract because the educational firms were not living up to expectations. Five other school districts threatened contract termination because of conflicts between the firms and school districts or alleged contract noncompliance.

TEST AND ANALYSIS CONTRACTOR

The test and analysis contractor was to pretest all students within the first 10 days of school. But since the contractor was not authorized to incur costs until August 17, 1970, and school opened in August in six school districts and in September in the others, the test and analysis contractor had very little time to procure tests, blank out publishers' identifying information on the tests, ship them to the school districts, and organize and implement testing for about 27,000 children.

In critiquing the performance of the test and analysis contractor, the 18 project directors reported to OEO that a lack of adequate preplanning time for determining testing sites, selecting students, selecting and adequately training testers, and preparing test booklets created hardships on the local school districts. The project directors stated that the test and analysis contractor's demands were not made known soon enough and that the test and analysis contractor's representatives arrived at the school districts without a clear understanding of their roles and responsibilities regarding the testing program. They stated further that some contractor representatives lacked experience in mass-testing and some school districts lacked the ability to handle mass-testing.

The test and analysis contractor informed us that all of its representatives were professionally qualified to coordinate mass-testing of students and that the extensive set of materials and the 1-day training session it conducted permitted its representatives to arrive at the school districts with a clear picture of their roles and responsibilities. Of the 17 representatives that visited the school districts, 5 had doctor's degrees and 12 had the required master's degree. The contractor stated further that, in fairness to all, the organization of the pretesting phase was a difficult assignment and the time frame was too short.

The test and analysis contractor did not supply the pretest results to some districts until late fall. The project directors stated that this made it impossible to identify pretested students and that pretests sometimes had to be given to some students as late as January 1971.

The test and analysis contractor informed us that there were relatively few cases in which pretests were administered late and that the majority of the pretest results were made available to the districts by October 1970.

MANAGEMENT SUPPORT CONTRACTOR

Because of the insufficient leadtime OEO apparently did not adequately explore the feasibility of the cost-effectiveness measure proposed by the management support contractor before contractually agreeing to the contractor's proposal. Later the contractor's proposal was found to be infeasible because cost data was not available from some school districts and educational firms. The scope of the cost analyses had to be reduced signficantly during the year, but the costs associated with the analyses and billed by the contractor to OEO increased. The cost comparisons between the experimental and control programs per school district were of little value because the costs were not related to student achievement gains as contemplated in the contract requirements.

OEO's contract with the management support contractor required the contractor to develop a cost data system which would identify program component costs per unit of student achievement and compare these costs for each instructional approach. The estimated cost of this task was about $20,000.

The management support contractor obtained the cost data from several data collection forms completed by school district officials or by the management support contractor during its onsite visits. This information related to the resources consumed by the program for such things as building space and teachers' salaries.

All direct costs related to the specific instructional program, plus a prorated share of the costs of all other activities that either involved or supported the student, were to be allocated to each instructional program. The supportive or noninstructional costs were allocated among the academic subjects on the basis of time spent in each subject. Experimental and control programs often differed in the amount of time required, pattern of resources consumed, and consequently in the amount of supportive costs

allocated to them. OEO and educational firm costs not typical of traditional school operations, such as administrative costs of the firms, were excluded, since OEO's intent was to estimate the cost that would be incurred if the programs were incorporated into the regular school programs.

The task of gathering the required cost data fell behind schedule shortly after the start of the school year, and the situation became progressively worse. By March 1971 OEO dropped attempts to accumulate costs for six school districts since OEO received little or no information from these school districts. Because insufficient data was provided by the educational firms, attempts for two additional districts were subsequently dropped.

Although the scope of the cost analyses was reduced signficantly, the cost to accumulate the data and make the necessary analyses rose from the initial estimate of $20,000 to an actual cost of about $57,000.

Because the thoroughness of the manner in which data was collected and substantiated varied from district to district, the project directors believed the use of the cost data system to evaluate and compare programs and program costs was questionable. They stated that this variance was probably due in part to the lack of cooperation by local educational personnel as well as the unavailability of data.

Further, the management support contractor's cost comparisons between the experimental and control programs were distorted because the comparisons included noninstructional costs. Noninstructional costs were allocated to the experimental and control programs on the basis of class time. However, many of these costs, such as salaries of administrative personnel and permanent plant and equipment costs, would not vary with the amount of class time. For example, the cost to operate a cafeteria does not depend on classroom time and therefore would not be an important consideration in comparing costs of different instructional techniques.

We believe that only direct instructional costs should be considered in determining the incremental or additional costs associated with selecting alternative programs. When noninstructional costs are included, the fundamental differences in the cost structures between the experimental and control programs are distorted.

For example, in its final report to OEO, the management support contractor showed the following comparison of the per student year costs between the experimental and control programs in reading for the elementary grades in one school district.

Program	Total cost per student year
Control	$216.63
Experimental	186.47

It appears that the control program is more expensive than the experimental. However, the control program spent 1.5 hours per day on reading instruction while the experimental program spent only 1 hour per day. Since noninstructional costs were allocated on the basis of time in class, 50 percent more was allocated to the control program than to the experimental program. Consequently, by eliminating the noninstructional costs from the comparison, the experimental program becomes more costly than the control program.

Program	Instructional cost only
Control	$118.88
Experimental	123.23

By eliminating the noninstructional costs from the comparisons, only a few programs changed from being more costly to less costly. However, any differences in the instructional times between the experimental and control programs would cause the cost comparisons to be less useful to local school officials for determining the difference in cost which could be expected if the alternative program was adopted.

In its final report to OEO, the management support contractor did not break down the instructional and noninstructional components of the total cost. Consequently, OEO did not attempt to determine to what extent noninstructional costs allocated to the programs had distorted the cost comparisons.

After we brought this matter to OEO's attention, OEO obtained the necessary cost breakdown from the management support contractor and included it in its final report in June 1972.

Furthermore, because of the unreliability of the student achievement data on a school-district-by-school-district basis, OEO was unable to make the cost-effectiveness comparisons initially intended, that is, the cost per unit of student achievement. Because an accurate measure of each program's cost-effectiveness could have been made only in this manner, OEO's comparisons of total costs between programs at each school district are of little value.

CHAPTER 4

ADMINISTRATION OF PRETESTS AND POSTTESTS AND INTERIM PERFORMANCE OBJECTIVE TESTS

Student achievement, as measured by standardized nationally normed pretests and posttests, was to be the primary measure of the impact of the experiment, as well as a basis for up to 75 percent of final payment to the educational firms. Interim performance objective tests were to be used as a basis for up to 25 percent of the final payment to the educational firms and as a supplemental measure of the impact of individual educational firms' instructional programs.

Although the test publishers stressed that standardized testing conditions were needed and specified other requirements to achieve valid results, they did not provide information concerning the effects that poor testing conditions would have on test scores. OEO and the test and analysis contractor recognized that the poor testing conditions encountered for certain grade groups and schools could have introduced a bias to their analysis of the experimental instructional programs' impact, particularly at the individual school district level.

OEO analyzed the aggregate results of the test data, however, on the assumption that the bias affected both the experimental and control groups equally. Reports on testing conditions prepared by the test and analysis contractor's onsite test monitors contained indications that this assumption may not be valid. In many instances, however, the reports lacked sufficient information to determine the extent and seriousness of the poor testing conditions.

Many of the less than ideal testing conditions during the pretests and posttests could be directly attributed to student behavior and may have occurred regardless of the amount of preplanning. However, many of the poor testing conditions resulted from a lack of planning and preparation.

The requirement for interim performance objective tests was impracticable because the conditions necessary to insure reliable results could not be met within the limited time before the tests were given. As a result, the tests were

virtually useless for evaluation and questionable as a basis for paying the firms.

TEST ADMINISTRATION DESIGN

The test publishers provided specific instructions on how to administer their tests to insure valid and reliable scores. The publishers stressed the need for uniform testing conditions and set out certain specific requirements, including good lighting, freedom from crowding, adequate writing space, and a sufficient number of proctors.

OEO's test and analysis contractor also specified two minimal conditions for administering the tests.

1. All tests were to be administered in classes of 35 or fewer students for grades 2 and 3 and classes of 25 or fewer students for grade 1.

2. All junior high students were to have tests administered in classes of 100 or fewer students with one proctor for every 50 students, in addition to the test examiner.

The test and analysis contractor stated that the recommended class sizes were established to insure standard conditions, to preclude cheating, and to speed test administration.

Students were given two sets of standardized pretests and posttests. Both the experimental and control groups were given an evaluation test at the beginning and end of the school year to assess the overall impact of the experiment. Only the experimental students were given a second set of standardized pretests and posttests to compute payments to the firms. Each grade was given three payment tests, except grade 1, which was given only one. The tests were randomly assigned, each to one-third of the students, so that each student took only one test.

The evaluation test called for two consecutive morning sessions for the elementary grades and two consecutive morning sessions plus one test administered on two consecutive afternoons for the junior high grades. The payment tests called for two consecutive morning sessions for the elementary grades and one morning session plus one separately timed test in the

afternoon for the junior high grades. These test schedules, the test and analysis contractor stated, were designed to eliminate the effects of fatigue, limited spans of attention, and boredom, especially in the elementary grades.

The test and analysis contractor, during a 1-day session, briefed test monitors for the pretesting. Emphasis was given to establishing a consistent pattern of operation among the school districts to provide as much standardization in administering the tests as possible. In addition, the test monitors were to provide a 1-day training session for test examiners at the sites to insure standardization of test administration procedures.

Each test monitor had to prepare a report answering 11 questions on the test, covering such topics as student selection, problems in arranging physical facilities and working with school personnel, test security, and events endangering valid test results.

PRETEST ADMINISTRATION

The test and analysis contractor reported that, because of time constraints, it could not visit 10 school districts that opened by the first week in September to arrange for administering the test. Instead, they explained the testing requirements to these school districts by telephone. The test monitors arrived at the sites 3 days before the evaluation test was to be given.

On the basis of the test monitors' reports, the test and analysis contractor reported to OEO that there were numerous deviations from its standardized testing procedures and incidents potentially affecting the validity of test results.

Deviations from standardized test administration procedures

Student selection, testing facilities, and testing time schedules deviated from the standardized test administration procedures established by the test and analysis contractor. Test monitors at eight school districts reported that students and, in some cases, schools had not been selected when they arrived at the sites. This delayed the evaluation and payment testing.

School districts had difficulty compiling definitive lists of students to be tested for such reasons as high student turnover rates and delays in obtaining parental permission. Also, some control schools had not been selected, and schools selected did not have enough students for the experimental and/or comparison groups and the control groups.

The test monitors reported that the class sizes during testing for certain grade groups at seven school districts exceeded the maximum sizes established by the test and analysis contractor. For example, at one school district, elementary school students from two or three grades were tested simultaneously in one large room. At another school district, two grades were tested in the auditorium using lapboards as writing surfaces. Test monitors at the remaining 11 school districts either did not describe the facilities or reported that the physical facilities were satisfactory.

Even though some problems were corrected after the first day's testing, in some instances more than one grade was still tested in a room. The obvious problems of having more than one test examiner speaking at a time and dissimilar testing time requirements for the various sections of the tests were compounded during the payment test since three different tests were given to each grade. Consequently, there were three different tests administered at one time in even those rooms with only one grade.

Nine school districts had some difficulty adhering to the test schedule, mostly due to problems with student selection and physical facilities. Other factors, such as weather conditions, were also reported to have caused delays.

Conditions potentially affecting test validity

Test monitors at 10 districts reported conditions which could have affected the validity of the pretest results for certain grades and/or groups. At two of these school districts, certain grades and/or groups had to be retested to obtain valid data. At one school district the evaluation test was regiven in grades 7, 8, and 9 because of discipline problems, inadequate testing facilities, and difficulty of students in hearing test administration directions in the facility used. At the other school district, extensive retesting was involved because of the chaotic circumstances

surrounding the initial pretest. The monitor at this school district reported that the initial pretest was discontinued because:

--Students had not yet been selected when he arrived, teachers at one control school were on strike, and another control school was outside the school district.

--The project director was not aware that a comparison group had to be selected and tested.

--The project director's staff was not yet hired.

--The program had been given no publicity; principals had been notified that they were to participate but had not been told what the program was about.

--Test facilities and other needs had not been discussed before he arrived.

--Test facilities were inadequate.

--Monitoring was inadequate.

--Unions, school officials, and teachers opposed the project.

--Testing conditions in all but grades 1, 2, and 3 of the control school were termed "mass confusion" with widespread cheating and student disinterest.

The students were retested in mid-October, and the results were considered satisfactory except that the control groups for grades 7, 8, and 9 were too small. Only the evaluation test was given in grades 2, 3, 7, 8, and 9 and only the payment test was given in grade 1. Consequently, no evaluation results were available for grade 1.

At the remaining eight school districts where incidents were reported, problems most often centered around discipline in the classroom and were generally limited to the junior high school level. In several cases, only some of the grades, schools, and testing groups were affected.

In one of the more serious incidents, the test monitor at one school district reported that conditions among the various testing locations varied greatly. Some rooms were air conditioned; others were not. At some locations the students were much more unruly, disinterested, and unmotivated than at others, although a lack of motivation was evident at all locations. In the elementary grades, the payment and evaluation tests were given in 1 day each instead of the 2 days recommended by the test and analysis contractor.

The test monitor reported that some students simply marked answers in a purely random pattern without regard to the questions. Some students slept through a considerable part of the test or talked and annoyed their neighbors. He stated that he could verify only the existence of test scores and could not certify that they represent a true measure of each student's capability. He expressed concern over the assumptions that would be made from pretests to posttests on the comparability of the conditions under which the two sets of tests were administered, since he stated that there was no way that the conditions of the first test could be repeated for the posttest. No retesting was conducted at this school district.

POSTTEST ADMINISTRATION

The test and analysis contractor made several recommendations to OEO for improving the posttesting program by considering the difficulties encountered in pretesting which resulted from the minimum of time available for planning and coordinating the program among the many distinctive school districts. For the most part, the test monitors' reports showed that posttesting conditions were greatly improved over pretesting conditions. There were much fewer problems with student selection, testing facilities, and scheduling.

Student selection was a problem only in a few instances where the lists of students prepared by the test and analysis contractor were incomplete, students were listed in the wrong groups or in more than one group, and lists contained students that did not attend the schools for which they were listed. For example, the majority of one district's ninth grade control students on the list provided by the test and analysis contractor did not attend the control school. As a result, no comparative evaluation of the program in the ninth grade was possible at this school district.

Eight test monitors' reports showed that class sizes exceeded those recommended by the test and analysis contractor or that classrooms were overcrowded for certain grades and/or groups. But only one of these test monitors stated that the facilities were unacceptable; most stated that they were adequate to excellent.

At this school district the test monitor reported that all experimental group students in the seventh grade were tested in one room (100 students). The eighth grade students were tested in three rooms in groups of 46, 47, and 25. With the exception of the group of 25, the test monitor felt that the test results for the first morning of evaluation testing were invalid because of student behavior problems. In the group of 25, conditions were considered marginal and would have been acceptable except that the junior high control students were tested under excellent conditions. The test monitor stated that this difference in the testing conditions for the two groups must be taken into account in comparing test results. He also reported that "all examiners felt that the testing had gone a whole lot smoother than the pretesting."

Deviations from scheduled test dates and times were reported in a few instances but did not seem significant, with one possible exception, when one teacher allowed the students as much time as they needed to complete the tests. This teacher was replaced on the second day of testing.

Other deviations from OEO's testing procedures occurred because firm personnel participated in the testing. Firm teachers at one school district were used as test examiners and at another district, they sat in the classrooms during testing. Firm teachers at five other districts were called into classes having discipline problems and were allowed to stay until student behavior improved. The teachers at one of these school districts remained to proctor the posttesting.

The test monitors at two school districts reported that the firms' elementary teachers offered their students rewards for behaving well and working hard during the test. At one of these school districts, the teachers also handed out candy to their students at the door of or in the test classrooms. The test monitors were disappointed at the teachers' attempts to influence the students. At the other school district the teachers were also telling the elementary students that they would be penalized for misbehaving during the test, but the test monitor requested that the negative incentive be dropped.

INTERIM PERFORMANCE OBJECTIVE TESTS

Interim performance objective tests were to be used as a basis for up to 25 percent of the final payment to the educational firms and as a supplemental measure of the impact of the individual educational firms' instructional programs. The tests were to be given to the experimental students five times during the school year to assess their mastery of the curricular materials to which they had been exposed.

Although the tests were administered, the conditions necessary to insure valid test results could not be met within the limited time before the tests were administered. As a result, the tests were virtually useless for evaluation purposes and questionable as a basis for payment to the firms.

The educational firms were required to submit to the test and analysis contractor three times the number of items

(questions) required for each of the five interim performance objective tests that were to be administered. They were also to submit the curriculum objectives on which these tests were based and to document the relationship between each question and the curriculums by the first day of school.

The test and analysis contractor then had to evaluate the data and determine whether the individual test items did or did not reflect a fair and relevant test of the educational firms' curriculums. If the test items were fair and relevant, the contractor was to certify such in writing to OEO; if not, the contractor was to notify OEO and the firms why they were not and recommend improvements. OEO's project manager was to settle any disagreements between the firms and the test and analysis contractor. After certification, the contractor was to submit the questions to the school districts. The project directors would then randomly select one-third of these questions to be included on the tests.

After school started, OEO realized that these requirements could not possibly be met before the scheduled test dates. Consequently, the test and analysis contractor did not evaluate and certify these tests before they were given. Moreover, on the basis of its evaluation, the test and analysis contractor concluded that most of the tests were deficient for several reasons.

Although the educational firms were requested to correct these deficiencies and all but one firms' tests were later certified as acceptable, the certifications were of little value since the deficiencies were not corrected until after the tests had been administered. Moreover, one firm, with the exception of one test in one school district, never provided interim performance objective tests for its three school districts. The tests were made up at the sites by each teacher; consequently, the tests certified were not the tests administered.

OEO expected these tests to measure the students' progress in the reading and mathematics programs of each educational firm. But insufficient controls over test content and administration precluded such an evaluation. The pass-fail rate for the tests varied significantly among firms and school districts.

For example, in one school district, the firm administered 1,424 mathematics tests to students in grades 7, 8, and 9, and the students failed only 108 of these tests, or less than 7.6 percent. In another school district, the firm administered 1,374 mathemtics tests to its students in grades 7, 8, and 9, and the students failed 967 of these tests, or more than 70 percent. OEO could not determine whether a high or low pass-fail rate was a result of the quality of the instructional programs or the inappropriateness of the tests given.

CHAPTER 5

CONTRACT ADMINISTRATION

OEO's procedures in soliciting proposals and in awarding contracts generally did not result in effective procurement. In its haste to begin the experiment in the 1970-71 school year, OEO did not, in our opinion, provide a reasonable period of time for prospective contractors to prepare responses to its request for proposals and for OEO to evaluate the responsiveness of proposals, including the reasonableness of cost estimates. This limited the number of companies submitting proposals and the amount and quality of information in the proposals submitted. As a result, OEO selected some companies which were not financially responsible, did not meet the technical experience requirements, and incurred significant contract overruns.

In addition, the various contracts entered into by OEO, the school districts, the educational firms, and the test and analysis and management support contractors were deficient in that certain responsibilities were not assigned, were assigned to more than one contractor, and/or were in conflict. The OEO contracting officer and project manager did not carry out many of their responsibilities according to well-established Government policies in contract administration as set forth in the Federal Procurement Regulations.

SELECTION OF THE EDUCATIONAL FIRMS

On April 27, 1970, OEO's request for proposals 70-107 was published in the Commerce Business Daily. The request announced OEO's plans to carry out a major field experiment in remedial education techniques in reading and mathematics and invited qualified firms in applied educational technology to submit proposals within the 2-week period ended May 11, 1970.

According to the request, the design of the performance contracting experiment had not been finalized but it was contemplated that the firms selected would each carry out instructional programs in three as yet unselected school districts having large disadvantaged and academically deficient populations. The experimental instruction would be with two sets of grades, first through third and seventh

through ninth, for an estimated hour each day in each subject for a full academic year.

The request for proposals stated that OEO would consider only those firms with a demonstrated capability in educational techniques and technology appropriate for helping disadvantaged children in reading and mathematics. It stated further that the purpose of the experiment was to evaluate the effectiveness of existing educational techniques, not to develop new techniques. To be considered, a firm must have demonstrated its capability to begin the instructional program by September 1970.

The criteria for evaluating proposals were set forth in the request for proposals, as follows:

> "The approx. six contractors who will participate in this experiment will be selected upon the basis of their responses to the following questions: (A) A statement of their general capability and a description of all corporate and staff experiences in the area of applied educational technology and training. (B) A full description of their proposed approach, I.E., the particular materials, procedures, types of hardware, (if any) and software used, etc., and a discussion of previous findings using this approach. (C) A description of how they propose to supply instructional staff, I.E., whether their own instructors will be supplied, whether they will train existing teachers or other local people, etc. (D) A description of the incentives, if any, which are part of their approach and whom they are mainly aimed at (E.G. Pupils, Teachers, parents, the school system). (E) A description of their approach to school/contractor cooperation, including teacher's unions."

Thirty-one firms responded by the 14-day deadline. Because the request for proposals lacked specific details on the experiment's design, such as the size of student populations, OEO sent an addendum to the 31 firms on June 2, 1970. The addendum, which spelled out in more detail the scale of the experiment, was prepared with the assistance of OEO's management support contractor and required a reply by June 10, 1970.

The firms were informed that all students would be at least one grade level deficient. Each firm was requested to indicate the final achievement levels and costs it was willing to guarantee if selected. Twenty-three of the 31 firms responded to the addendum.

OEO's review of the 23 proposals was accomplished in two phases. The first phase consisted of grouping and ranking the firms in terms of their curriculum and hardware (learning systems), incentives, staffing patterns, approach to school-contractor relationships, and individual and staff experience. The phase II review was concerned with the minimum grade level guarantees made by the firms and the cost per grade level increase.

OEO selected six educational firms which represented separate approaches to remedial education and which offered costs that would not prohibit installing the program in schools on a large-scale basis if warranted by the results of the experiment.

OEO did not use selection criteria specified in request for proposals

Our examination of the firms' proposals indicated that none of the firms selected had the existing educational techniques and demonstrated capabilities initially deemed necessary by OEO. Initially, the criteria for selecting firms, as stated in the request for proposals, was to limit the selection to those firms which had a demonstrated capability in using existing educational techniques and technologies appropriate for helping disadvantaged children in reading and mathematics. However, OEO's evaluation of the firms' proposals was not based upon this criterion but rather upon an assessment of a firm's proposed innovative systems or approaches for helping disadvantaged students. A brief summary of the firms' stated experience with the approaches proposed to OEO follows.

1. Firm A did not refer to any previous findings using its proposed instructional approach or to the specific curriculum materials that would be used. Moreover, the firm did not provide any information concerning its general capability, corporate and staff experience in applied educational technology and

training, or a description of its approach to school-contractor cooperation, including teachers' unions, as required by the request for proposals.

2. Firm B claimed to be the Nation's largest system of programed learning centers with 66 in operation and 50 more scheduled to be opened by October 1970. The operating centers were testing over 1,000 students per month, an average of fewer than 16 students per center.

3. Firm C, established in 1967, had prior Job Corps experience and was operating one learning center which provided instruction in mathematics and reading to over 50 students per day from preschool to high school. Some of these students were from minority groups, were dropouts, and participated in remedial work and enrichment study programs.

4. Firm D listed its past experience as being in vocational skills training, adult basic education, and college remedial training and tutoring. It gave no indication as to the number of students involved and presented no discussion of previous findings, except for a brief statement on its college program. The firm stated that it was also experimenting with a small number of high school and junior high school students and dropouts using the format of the college remedial training and tutoring program but that no results were available yet.

5. Firm E, established in 1967, did not claim, in its proposal, to have had any previous experience in conducting remedial instruction for disadvantaged children. It claimed, however, to have developed an empirical process for creating new and modified materials which could be readily adopted to almost any subject matter. In addition, it claimed to have developed, tested, and refined an administrative planning tool which encouraged more precise design of educational planning and evaluation activities.

6. Firm F's past experience consisted of operating a Job Corps Center and a vocational rehabilitation

center. The firm planned to open its first learning center in September 1970, which would offer creative learning environments and self-motivation instructional techniques for private students from ages 3 to 8.

After OEO decided not to base selection of a firm on the criteria set forth in the request for proposals, an amendment to the request for proposals should have been issued apprising all offerors of the changes. This would have notified offerors of the criteria against which their offers were to be measured and would have placed them on an equal basis as required by the Federal Procurement Regulations.

Financial responsibility of firms

The Federal Procurement Regulations (1-1.1203) also require a contracting officer to determine whether a prospective contractor (1) has adequate financial resources for performance or has the ability to obtain them as required during performance and (2) has the necessary experience, organization, technical qualifications, skills, and facilities or has the ability to obtain them. Although OEO's contracting officer certified that the six educational firms were financially responsible, at least two of the firms, in our opinion, did not meet the conditions necessary to make such a determination. Financial stability was extremely important in this procurement because of the unusual payment provisions in their contracts.

Under the contracts each firm could receive fund advances up to 80 percent of the total contract price in seven installments throughout the school year. Each firm received advances of from about $370,000 to $655,000. Total advances amounted to about $3.25 million. The contracts also required each firm to purchase a repayment bond within 5 days of the effective date of the contracts. However, because of the nature of the performance incentive contract, that is, the uncertain amount of final payment, and the inadequacy of the financial resources of the firms, only one firm was successful in obtaining a repayment bond.

On February 22, 1971, the OEO Internal Audit Division issued a report on its review of the financial records of the

six firms. The purpose of the review was to determine (1) the cost incurred by each firm from inception of the contracts through December 31, 1970, (2) the excess, if any, of the advances over costs incurred for the period ended December 31, 1970, and (3) the financial status of each firm and its ability to refund advances in excess of the settlement claim in the event that the contract was terminated or that the guaranteed student grade level gains were not achieved. The report concluded that four firms were capable of guaranteeing repayment of any advance in excess of the final settlement but that firms A and D were not.

The OEO audit report pointed out that firm A was a very small undercapitalized business operating at a loss at the time OEO selected it. At July 31, 1970, its books showed a retained deficit of $42,283 and current liabilities exceeded current assets by a ratio of almost 2 to 1.

Firm D was also very small. Statements prepared from its unaudited records for the 11 months ended September 30, 1970, indicated that it had limited financial resources and that income from sales other than to OEO would have been under $10,000 for the period.

As a result of the failure of five of the six firms to obtain repayment bonds, OEO accepted alternative indemnification agreements in which corporate assets were pledged in lieu of a repayment bond. However, firms A and D did not have sufficient assets to pledge to meet the requirement.

SELECTION OF TEST AND ANALYSIS CONTRACTOR

On July 16, 1970, OEO published its request for proposals for selecting the test and analysis contractor in the Commerce Business Daily and also mailed copies to about 50 companies. The closing date for receipt of proposals was July 31, 1970, 2 weeks after the date of publication. The scope of the work to be performed over 2 years was essentially to:

1. Select, administer, and score four standardized nationally normed achievement tests to be used for payment and evaluation purposes.

2. Review, certify, monitor, and score five interim performance objectives tests to be prepared by the educational firms and administered by the schools' project directors.

3. Construct and administer a parent attitude and socioeconomic data questionnaire, interview ninth grade students, and collect other data for analysis.

4. Develop a statistical analysis plan on test scores and other data collected.

5. Evaluate and report results.

The criteria and weights used by OEO in evaluating and selecting the contractor were: 40 points on technical proposal, 35 points on corporate experience, and 25 points on individual experience.

OEO received nine proposals in the 2-week response period and evaluated them in three phases over 2 weeks.

Phase I consisted of reviewing and ranking each proposal in terms of its responsiveness to the request for proposals. Five of the companies at this time were found unacceptable because each lacked corporate and individual experience in test and measurements, mathematics and reading curriculums, school management, large-scale testing and test scoring, and data processing and statistical analysis. The

request for proposals had stated that a successful bid would require organizational and professional staff experience in all the above.

Phase II consisted of interviewing the four companies judged responsive to discuss every aspect of their proposals, to question them on their ability to manage each phase of the work, and to explore in detail their approaches to the technical issues.

Phase III consisted of giving those companies interviewed in phase II an opportunity to correct deficiencies noted during phase II.

During phase III OEO eliminated one company from consideration because its cost proposal was nearly twice that of any other company and it informed OEO that costs could not be significantly reduced. The cost proposals of the three others, as revised during phase III, ranged from $503,414 to $714,077. OEO selected the number-one-ranked company at an estimated cost of $614,346.

In reviewing the proposal of the successful company, the OEO evaluation team commented that it was also weak in three of the areas which resulted in the elimination of five other companies during phase I. The company was considered weak in these areas because (1) none of the assigned staff had ever participated in large-scale testing and test scoring, (2) the company had limited expertise with the kind of quantitative analytical approach required for this evaluation, and (3) it lacked corporate experience in mass-testing.

OEO authorized the test and analysis contractor to incur costs beginning on August 17, 1970. On October 30, 1970, both parties executed a cost-plus-a-fixed-fee contract in the estimated amount of $614,346. The final cost to OEO for the services of this contractor, however, will amount to over $1,082,100, an increase of 76 percent over the initial contract amount. A greater overrun would have occurred except that cost savings resulting from reductions in the scope of the contract, as directed by the project manager, amounted to about $142,000.

Factors contributing to
significant contract cost overrun

Two factors contributed to the significant contract overrun incurred for the test and analysis function. First, one important item of information in the request for proposals concerning the selection of schools and students was inaccurate. This information significantly affected both the proposed costs and the proposed technical evaluations of program results in the companies' proposals. Second, the cost proposal of the test and analysis contractor did not completely and accurately estimate the costs to perform the functions specified in the request for proposals.

OEO stated in its request for proposals that the schools would be randomly assigned as control or experimental, that the students within the experimental schools would be randomly assigned to experimental and comparison groups, and that the students within the control schools would be randomly selected from all low-achieving students and assigned to the control group. However, the schools were selected on the basis of the most deficient schools in the district and students selected were the most deficient in the schools.

As discussed in chapter 2, the resulting mismatch of experimental and control groups was a significant problem in analyzing the results. Since the initial contract costs were based on a random selection process, the test and analysis contractor incurred significant additional costs in attempting to statistically account for the bias introduced through the nonrandom selection.

Also OEO did not determine the completeness and reasonableness of the cost estimates submitted by the test and analysis contractor, though required by the Federal Procurement Regulations. Consequently, a substantial portion of the contract overrun was due to the fact that the cost estimates were not a complete and accurate estimate of the costs to perform the tasks specified in the request for proposals.

The most significant item contributing to the cost overrun was the omission of payments for onsite test examiners from the contractor's proposal. The proposals of two

unsuccessful companies indicated, however, that there was confusion as to who would pay the onsite test examiners. One proposed to pay the onsite examiners, while the other stated specifically that it would not pay them.

OEO contract files contained no documentation as to this significant omission or to the time it became evident. OEO officials informed us, however, that they did not realize that the test and analysis contractor had omitted the cost for this item. This cost omission was discovered sometime between the date the contractor was selected, August 17, 1970, and the first day of pretesting in the school districts, August 31, 1970.

Although the test administration requirements were significantly reduced during the school year, these costs exceeded $200,000. OEO informed us that it assumed a $30,000 item in the cost proposal provided for onsite test examiners. The contractor stated the $30,000 in its proposal provided only for 21 onsite test coordinators and that it assumed OEO or the schools would pay the onsite test examiners.

Pretesting was completed by October 2, 1970. The cost to the test and analysis contractor for onsite test examiners for pretesting amounted to about $94,000. OEO did not, however, include an estimate of the costs for test examiners for either pretesting or posttesting even though the contract was not signed until October 30, 1970.

OEO's discovery of the omission should have, as a matter of sound procurement practice, prompted either a reopening of negotiations or a formal reconsideration of the award selection on the basis of new information. As a practical matter, however, OEO's hands were tied because conducting pretesting within the time frames set forth in the contracts was critical to the experiment. However, there was no excuse for the failure to squarely confront the question raised and formally resolve it.

The failure of OEO to discover the cost omission during its evaluation of proposals points up a material deficiency in its procurement practices; that is, the failure to conduct the cost analysis required by the Federal Procurement Regulations 1-3.807-2(c). Moreover, OEO's action in not

attempting to cover this major cost item in its formal contract is questionable from the standpoint of contract administration. At a minimum, OEO should document its discovery and resolution of such situations.

Other items not included in the test and analysis contractor's cost proposal, such as the cost of travel of test monitors for the interim performance objective tests, communication, and freight, totaled approximately $27,000. The contractor's underestimates of the costs of a number of other items accounted for overruns of an additional $145,000.

SELECTION OF MANAGEMENT SUPPORT CONTRACTOR

During April and the first part of May 1970, OEO intended to award the management support contract to one of two companies being considered. Both had submitted proposals and discussed the procurement with OEO. The OEO General Counsel, however, deemed this type of procurement unsound and recommended that competition be obtained for the procurement.

On May 7, 1970, OEO invited seven selected companies, including the two with whom negotiations had already been held, to attend a presolicitation conference on May 12, 1970. At this conference, the companies were given the request for proposals, which had a closing date of May 19, 1970--a response time of only 7 days. OEO officials informed us that it had to contract for prior experience and therefore the competition was limited.

The request for proposals set forth nine tasks that the companies were to address in their proposals. The tasks included developing criteria and a system for selecting schools and students, developing and implementing a documentation system, developing a cost data system for comparing program component costs to student achievement, and auditing educational firm curriculums.

The criteria and weights to be used in evaluating and selecting a company to perform the management support function were (1) 40 points for the technical proposal, (2) 20 points for relevant corporate experience, and (3) 40 points for relevant individual experience. Only three companies submitted proposals within the week allowed--the two with whom OEO had already been negotiating and one other. One company that did not submit a proposal informed OEO by letter that it could not develop an adequate proposal in the time allowed. After initial evaluation of the three proposals, only the two companies with which OEO had originally negotiated were invited to attend conferences for further negotiations.

The third was eliminated from further consideration because its proposal, according to OEO, was too general and the company lacked corporate and individual experience in performance contracting. The successful management support

contractor was selected within 7 days after the closing date for proposals because its technical proposal was judged superior in its approaches to developing and implementing information systems, student selection and matching, mitigation of testing problems, and cost analyses.

It appears that although OEO attempted to achieve some competition for the award, the criteria and weights specified in the request for proposals and used by OEO in evaluating the proposals restricted the bidders to the two companies with which OEO initially negotiated. The request for proposals stated that corporate and individual experience in education which was relevant to the tasks to be performed would account for 60 percent of the company's total rating. In evaluating the three proposals, OEO emphasized corporate and individual experience in performance contracting in education. Since there had been only one well-known experiment in performance contracting, Texarkana, and the two companies initially considered by OEO had the only individual and/or corporate experience as a result of the Texarkana experiment, it appears that no other companies could have met OEO's qualifications. Moreover, these two companies had an additional advantage in that they had already submitted preliminary proposals and held discussions with OEO prior to the presolicitation conference. Consequently, the procurement procedures amounted to little more than token acquiescence by OEO program officials to the General Counsel's suggestion that competition be solicited.

OTHER CONTRACT ADMINISTRATION PROCEDURES INADEQUATE

The contracting officer and project manager did not carry out their responsibilities in accordance with well-established Government policies in contract administration set forth in the Federal Procurement Regulations. The contracting officer did not perform all required administrative actions necessary for effective contracting, and on numerous occasions the project manager exceeded his authority by issuing orders, both oral and written, changing the scope of the work, the compensation, and the period of performance without the written approval of the contracting officer.

Some of the deviations from the Federal Procurement Regulations resulted from insufficient leadtime and the need to make immediate decisions concerning the conduct of specific functions during the experiment. However, OEO did not reduce to writing changes in the scope of the work, compensation, or period of performance on a timely basis. In some instances the final written contract modifications amounted to little more than a written ratification of the events that took place during the school year.

Contracting officer

Federal contracting officers are responsible for safeguarding the Government's interests and insuring that contractors comply with their contracts. OEO's contracting officer, however, did not fulfill his responsibility in the following areas:

1. A cost analysis of the proposals submitted by the companies competing for the test and analysis and management support functions was not made.

2. Subcontracts were not formally approved at the time of their award, though required by the prime contract.

3. Although numerous changes were made in the various contracts, formal contract amendments were not made on a timely basis.

Project manager

As the authorized representative of the contracting officer, the OEO project manager had the authority to represent the contracting officer in connection with the operations of the contractors. However, the project manager was not authorized to issue orders which would change the scope of the work, the compensation, or the period of performance. Such authority resided with the contracting officer and any changes made should have been reduced to a formal written modification to the contract.

Numerous changes in the scope, the compensation, and the period of performance of the various contracts, however, were made at the direction or with the concurrence of the project manager.

For example, OEO's contract with the test and analysis contractor was amended twice during the experiment. The first contract modification was dated June 30, 1971, after the close of the school year and contained numerous changes to the scope, the period of performance, and the compensation. With few minor exceptions, these changes had already been made during the school year as authorized by OEO's project manager.

The second modification was dated May 3, 1972. This modification also made numerous changes to the scope, the period of performance, and compensation, all of which had been authorized by OEO program officials after the first modification. In fact, the second modification was not signed by both parties until over a month after the extended contract termination date specified in the modification.

The two modifications resulted in a net increase in the total contract amount of $467,800, after savings resulting from reductions in the scope, and were, in effect, little more than written ratifications of the actual work performed.

CERTAIN RESPONSIBILITIES NOT ASSIGNED OR IN CONFLICT AMONG CONTRACTS

Because of the interrelated responsibilities of the various parties to the experiment, similar clauses were in each contract detailing specific responsibilities. A number of functions, however, were either not assigned, were assigned to more than one contractor, and/or were in conflict.

These deficiencies were due, in part, to the short time available during the implementation of the experiment to iron out the complicated interrelationships of the various parties involved.

Preparation and administration of interim performance objective tests

The contracts with the educational firms stated that the test and analysis contractor would construct interim performance objective tests from the pool of test items (questions) furnished by the firms. The test and analysis

contractor's contract stated, however, that the project directors in the school districts would prepare the tests from the pool of test items received from the test and analysis contractor. The school districts' contracts did not mention who would be responsible.

With regard to test administration, OEO's contract with the test and analysis contractor stated that the school districts would administer the tests. The contracts with the school districts and the educational firms stated that OEO or its designee would administer the tests. The educational firms actually constructed and administered, or assisted in administering, their own interim performance objective tests. OEO has paid or intends to pay the educational firms a total of about $200,000 for the added work in preparing and administering these tests.

Dropout and replacement testing

The school district contracts with OEO stated that OEO's designee would test student dropouts. The educational firms' contracts stated that the test and analysis contractor would test them. However, the test and analysis contractor's contract stated that it would not be responsible for dropout and replacement testing of students. The matter was resolved by an amendment to the contracts with the school districts which provided additional funds for this purpose of $1,250 per school district, or a total of $22,500.

Curriculum audit

OEO's contract with the management support contractor required the contractor to develop techniques to assess the degree to which increased learning was due to "teaching to the tests" or to actual improvement in achievement level. According to the contracts with the educational firms, the test and analysis contractor would preaudit the educational firms' instructional programs to determine whether standardized test items were included in the curriculums. No requirement for such a preaudit was contained in the test and analysis contractor's contract. The management support contractor's responsibilities were subsequently expanded to include a preaudit and a continuing audit of the educational firms' curriculums, and added compensation was provided for this.

CHAPTER 6

PAYMENTS TO THE EDUCATIONAL FIRMS

The crux of the performance contracting concept is that the educational firm is paid only to the extent that it raises student achievement levels. However, final payments to the educational firms bore little, if any, relationship to the initial payment provisions of the contracts or to the firms' success in raising student achievement levels.

Because of (1) the insufficiency of the initial contract payment provisions, (2) changes to the scope of the contracts, and (3) operating conditions which hampered the educational firms' ability to perform, OEO made a number of adjustments to increase the educational firms' earnings. The most significant increases in the firms' earnings resulted when OEO (1) reimbursed all firms for so-called lost instructional time--about $845,000--and (2) dropped the incentive provisions of the contracts in favor of cost reimbursement for all grades in one school district and for three grades in another school district--about $172,000.

In our opinion, OEO's adjustments go beyond the original language and intent of the contracts and, in some cases, are unreasonably generous. In making the adjustments, OEO recognized that the conditions under which the firms conducted their instructional programs differed significantly among some school districts and firms and, in some instances, had a detrimental effect on the firms' ability to perform; that is, to instruct the students and thereby raise their achievement levels. OEO stated that, although these factors had affected the firms' ability to meet their contract guarantees for student achievement, they did not relate to comparisons of student achievement results between experimental and control programs.

We believe that any conditions which have adversely affected the performance of the educational firms may have also adversely affected the reliability of comparisons of results between the experimental and control programs. The basic measure for evaluating the results of the experiment and for computing payments to the firms was the same--student achievement.

Also, in settling the contracts with the educational firms, OEO has accepted full responsibility for any conditions not in accordance with the contract language. It seems to us that OEO should have expected the contractors to accept more of the responsibility for these conditions. We did not find any evidence demonstrating that the contractors were not aware of the intent of most of the contract provisions at the start of the school year. It appears to us that many of the contractors' objections to OEO's methods for computing earnings resulted because they overstated their abilities in guranteeing such high increases in student achievement levels.

PAYMENTS TO THE EDUCATIONAL FIRMS FOR PRETESTS AND POSTTESTS

The educational firms' contracts specified that up to 75 percent of the total contract amount could be earned on the basis of student achievement measured by the pretests and posttests. It is important to point out that payments to the firms were to be computed on the basis of each student's achievement and that there was no limit on the amount a firm could earn per student. The 75-percent ceiling applied to the aggregate of payments for all students. Generally, a gain of 1.5 grade levels by all students would have been necessary for a firm to receive payment of 75 percent of the contract amount.

During the school year OEO and the educational firms discovered that, because of changes to the contract scope and other unanticipated occurrences, the initial payment provisions of their contracts dealing with pretests and posttests were no longer sufficient. OEO and the educational firms held discussions near and at the end of the school year to resolve the issues obstructing final settlement of the contracts.

Student underenrollment

The contracts between the educational firms and the school districts stated that 100 students would be provided in each of the 6 grades, with the exception of the 3 small school districts in which only 75 students per grade were required. However, 60 out of the 108 grades had fewer than the required number of students in the experimental program

for the full school year. Consequently, OEO devised a payment formula to compensate the educational firms for these "empty seats." The amount to be paid for underenrollees, as proposed by OEO, was computed by taking the average payment for full-time students multiplied by the number of underenrollees prorated for the period of underenrollment.

Students not below grade level

The educational firms' contracts stated that students in the experimental groups would all be performing below grade level in mathematics and reading. There were, however, a number of experimental group students who performed at or above grade level in each school district. In one school district 24 percent of the experimental group students were performing at or above grade level.

The educational firms argued that their programs were designed for underachievers and, therefore, could not be effective with children who were performing at or above grade level. Because the contract provisions had been specific as to entry level, OEO agreed to waive the firms' minimum guaranteed grade level gain and pay for any achievement gains made by the above-grade-level students during the school year.

Students achieving lowest possible test score

When the test and analysis contractor and OEO selected the standardized tests, OEO apparently overlooked the potential problem that the measurement devices selected for first and second graders could not measure below a 0.6 grade level. Consequently, when a large segment of first graders and, to a lesser extent, second graders scored a 0.6 entry level, the educational firms felt that many of these students should have been ranked lower. Since there was no way to precisely place them on a scale between 0.0 and 0.5, OEO arbitrarily adjusted grade levels downward to 0.2 for first graders and 0.3 for second graders.

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On June 1, 1971, OEO sent the proposed contract modifications discussed above to the firms with the stipulation that no payment test results would be released until the

modifications were signed. During the subsequent negotiations the educational firms and OEO negotiators were denied access to both the evaluation and payment test results. By late fall, however, OEO stated that this was no longer practicable for OEO negotiators, but that by then their bargaining position was fairly well fixed and not affected by the knowledge of test results. The firms signed the modifications between June and November and payment results were released to them. Other minor modifications were also made a part of the contracts at this time.

The initial payment test results released to the firms showed that, on the basis of the pretest and posttest scores, the firms earned an average of only 33 percent of the total possible, or $1.1 million of a possible $3.3 million. (See app. III.) With the exception of one firm in one school district which earned 56 percent, none of the other firms' earnings exceeded 43 percent of the contract amount. Two firms each earned only 19 percent in one of their school districts.

Because of these disappointing earnings, the educational firms further protested to OEO that their ability to perform was seriously hampered during the year and consequently their total earnings were less than expected. Discussions were subsequently held to further negotiate final settlement of the contracts.

Lost instructional time

Two educational firms had brought the issue of lost instructional time to OEO's attention during the meeting held before the close of the school year. OEO took the position that lost time was not an issue since the time claimed as lost was not significant and would have little or no impact on student achievement. Consequently, OEO did not include an adjustment for lost instructional time in its June 1 proposed amendments to the contracts. After payment test results were released, the educational firms again argued that the lost instructional time contributed to the students' poor showing on the tests.

The educational firms complained to OEO that the instructional time afforded them during the school year was not in accordance with the contract. The majority of the

contracts contained the following clause on the amount of time which would be available to the firms:

> "The project shall continue for the full 1970-71 academic year, consisting of approximately 180 class hours of instruction in each of reading and math."

Some of the contracts, however, used the term "class periods" instead of "class hours." The firms claimed that the time available was less than 180 classes of 1 hour each per subject due to (1) testing requirements, (2) interruptions, such as assemblies and fire drills, and (3) class hours or periods of less than 60 minutes in some schools.

The firms argued that the students would have achieved greater gains with more time and thus requested, during meetings with OEO, that they be compensated for this lost time. Their position was that OEO should adjust the grade gains on the basis of the assumptions that (1) the contract entitled them to 180 class periods during the year regardless of other provisions in the contract, such as time set aside for testing, and (2) the contract entitled them to 60 minutes per class period.

OEO agreed that the firms actually had less instructional time than it had anticipated and that some adjustment was in order. It devised a formula for uniformly adjusting each firm's earnings, as follows:

$$\text{Adjusted grade gain} = \frac{\text{Enrollment period}}{\text{Actual average attendance of all full-time students}} \times \frac{\text{Expected minutes in class hour}}{\text{Actual minutes in class hour}} \times \text{Actual grade gain}$$

The formula adjusts actual student achievement in direct proportion to the amount of instructional time lost. As we pointed out earlier in the report, research findings indicate that the length of a class period can have an effect on achievement. However, the basic assumption underlying the formula is that student achievement increases in direct proportion to the minutes in the class. Although there is no educational support for this assumption, OEO proceeded on this basis for the purpose of adjusting the earnings of the firms.

The results of the formula are demonstrated in the following example using a hypothetical student and the actual adjustment formula for one firm in one school district. A student, John Doe, scored a grade gain of 0.9 on the pretests and posttests. Assuming the firm guaranteed a minimum 1.0 grade gain, no payment was due. The school district in which John Doe was a student, however, had instructional classes of only 40 minutes and the average student attendance during the year in this school district was 134 days. The enrollment period for the school year was 165 days. John Doe's adjusted grade gain would be 1.7 computed as follows:

$$\frac{165}{134} \times \frac{60}{40} \times .9 = 1.7$$

The firm would then receive $81 for achieving the mininum guaranteed grade increase for John Doe of 1.0 and $8.25 for each 0.1 grade level increase above the minimum, or $57.75. Total payment to the firm for John Doe would be $138.75 based on pretests and posttests.

Enrollment period

Although the firms' contracts stipulated that approximately 180 class hours, or periods, would be available, two other clauses in the contracts set aside a period of up to 25 days during which testing would be conducted, as follows.

1. OEO or its designee shall administer the pretests not more that 10 days after the contractor's first day of classes.

2. OEO or its designee shall administer the posttest no earlier than 10 days prior to the contractor's last day of classes. This was later changed to 15 days so as not to have testing going on during the last week of school.

OEO officials stated that the contracts were clear on the number of days that would be set aside for posttesting and concluded that the educational firms should not have expected students to achieve further grade gains after the posttesting began. OEO felt that the clause on the period during which pretesting would be conducted left unclear the number of days, if any, that the firms should expect to lose because of testing. In effect, OEO interpreted the

contract to mean that the 180 days specified in the contracts less 15 days for posttesting, or 165 days, would be available for instruction.

On the basis of the contract language, it appears fair to us to say that the firms assumed the risk that, at the worst, pretesting would be completed on the 10th day after the start of school and posttesting would commence 15 days before the end of the school year. It would not have benefited the firms to instruct students before the pretest since theoretically it might enhance the students' initial scores to the economic detriment of the firms. By the same token, students' achievement resulting from instruction after the posttest would not be recognized for payment purposes. It appears to us that the contract clearly indicated that pretesting and posttesting was independent of class instruction and that the firms would not have a full 180 class hours for instruction because of pretesting and posttesting requirements.

Class hour or period

OEO used the 165 days as the numerator in the first fraction, the enrollment period, and 60 minutes as the numerator in the second, expected minutes in each class hour. OEO stated that the meaning of class hours, or periods, in the firms' contracts was also ambiguous but that it initially intended class hours, or periods, to be 60 minutes.

The denominator in the first fraction, actual average attendance, was computed on the basis of the actual average attendance of full-term students. (See app. IV.) The denominator in the second fraction, actual minutes in each class period, was, as the term implies, the actual length of the class period in minutes, calculated by averaging the class periods for grades 1 to 3 and 7 to 9. Moreover, when actual class minutes exceeded 50 minutes, OEO used 50 as the denominator. We believe that in calculating the average attendance and actual class minutes, OEO has taken a position which is not reasonable or equitable to the Government, as shown in the following examples.

Example 1--Although OEO reduced the enrollment period from 180 to 165 days by eliminating the last 15 days of the school year because of posttesting, it also reduced the actual average attendance to a maximum of 155 days because

OEO did not consider student attendance during the first 10 days of school, the period during which pretests were to be administered. By disregarding student attendance both during the first 10 days and the final 15 days, a maximum of 155 days remained for computing student attendance and OEO automatically compensated the firms for 10 days. In addition, OEO has reimbursed firms for every student absence during the year which, in effect, is the same as if OEO had guaranteed absolute perfect student attendance. The firms' earnings were adjusted upward to the extent that actual student attendance during the year was less than perfect.

The use of actual average attendance is inconsistent with a provision in the firms' contracts which stated that students may not be dropped from the program unless absent for 10 consecutive days or intermittently for 15 days over 3 months. OEO apparently disregarded the implications of this provision by regarding normal student absences as a condition for which the firms should be reimbursed. Within the parameters of the contracts, the firms clearly bore the risk of absences during the year.

Example 2--A class hour or period varied significantly in the school districts, and, more often than not, it was less than 60 minutes. Since OEO admitted to the firms that it had contemplated 60 minutes of class time per subject per day, it agreed to reimburse the firms for the lost instructional time. However, in adjusting the firms' earnings, OEO used 50 minutes as the maximum time available to the firms when, in fact, six school districts had longer class periods. In two school districts the firms had 60-minute class periods, as shown in the following table.

Actual minutes for class period	Number of school districts
40	2
42	1
45	2
48	2
50	5
54	1
55	1
56	1
57	1
60	2
Total	18

If the purpose of the formula was to compensate firms for the instructional time lost and, consequently, the loss in student achievement, then no adjustment for the length of class periods was warranted for two school districts and OEO overcompensated four other firms by using 50 minutes as the maximum. It appears then that the firms in these six school districts had the benefit of the extra time and still received a generous adjustment to their earnings.

The net effect of the adjustment was to increase the overall earnings of the firms based on pretests and posttests by about 78 percent, or $844,991. Each firm's earnings in each school district increased at least 36 percent, and one increased by as much as 101 percent. (See app. V.) Although the lost time issue was one of the major obstacles to settlement with the educational firms, only one firm has settled in all three of its school districts on the basis of this adjustment. Two other firms have accepted the formula as a basis for settlement in two of their three districts but have settled for nothing less than a cost reimbursement for all or part of the grades in their third districts.

PAYMENTS TO THE EDUCATIONAL FIRMS FOR INTERIM PERFORMANCE OBJECTIVE TESTS

The educational firms' contracts specified that up to 25 percent of the total contract amount could be earned on the basis of student performance on interim performance objective tests. For the firms to recover the full 25 percent, however, it was necessary for all students to pass all five tests in each subject.

As pointed out previously, the requirement for interim performance objective tests was impractical in light of the short time available to the educational firms and the test and analysis contractor to fulfill the contract requirements. However, the contracts with the educational firms provided for payment on this basis and OEO reimbursed the firms to the extent that students they instructed attained passing grades on the tests. The firms' earnings amounted to about $795,000 of a possible $1,093,000, or 73 percent. (See app. VI.) OEO ignored, in contract settlement, contract clauses dealing with the dates and periods for administering the tests, regardless of whether the firm observed such requirements during the year.

Two modifications to the original contract affected provisions for interim performance objective tests. The first provided a method of payment to the firms for students that were absent through no fault of the firm during the period in which the test was administered. The second modification provided for reimbursement of the costs incurred by the firms in preparing and administering interim performance objective tests, a task not specified in the original contracts.

The second modification was a part of the final contract settlements with the firms and had been signed by only three firms as of March 28, 1973. Payments to these firms for preparation and administration ranged from $29,470 to $38,750, an average of $33,585 per firm. The three remaining firms will be reimbursed for these costs as part of their final contract settlements, and we assume that these amounts will be similar to those already paid. The total cost to OEO then could exceed $200,000 for preparing and administering the interim performance objective tests.

COST REIMBURSEMENT SETTLEMENTS

As a result of extensive negotiations with the firms, OEO agreed that the conditions were such during the school year that settlement on a cost-reimbursable basis was warranted for all grades in one school district and for three grades in a second school district. Under the cost-reimbursement settlements, the initial contract provisions which called for a 75-25 percent split between pretests and posttests and interim performance objective tests no longer applied. The firms were paid strictly on the basis of costs incurred up to a maximum of 100 percent of the total contract amount. OEO's position on this issue was that the contracts with the firms assume sufficient tranquility to conduct the experiment but that the actual conditions prevented the firms from performing under the contracts as contemplated. Therefore, the incentive payment provisions no longer applied.

OEO stated that disruption to the programs for pretesting, teacher strikes, and teacher hostility were all present to some degree at the two school districts. Further, OEO concluded that to perform, the firms required an opportunity to improve students' skills in reading and mathematics; however, the disruptions and problems made it impossible for the firms to have that opportunity.

In its overall evaluation of the results, however, OEO discounted the disruptions as having an adverse effect since equal weight was given in the analysis to the test results of these two school districts.

Specific instances of the disturbances to the firms' programs included late testing, class disruptions from teachers' union opposition, a 3-day shutdown because of a teacher strike, classroom furniture not in place, open hostility between firm and school personnel, breakage and stealing of equipment, and severe student discipline problems. Although the contracts made provisions for a number of these occurrences, OEO felt that it was necessary to disregard these provisions to make an equitable settlement. For example, specific provision was made for strikes enduring for 30 days or more but no recourse was provided to the firms for strikes of lesser duration.

As shown in the following table, payments to one firm were significantly greater in the school district for which settlement was made on a cost-reimbursable basis than in the school districts for which settlement was made on the incentive basis, even after the payment adjustments discussed in the previous sections were made.

School district	Payment to educational firm B		
	Based on actual student achievement	Adjusted by "165 formula"	Final
1	$132,186	$171,675	[a]$191,050
2	130,648	217,847	[a]226,551
3	121,979	180,758	[b]228,000
	$384,813	$570,280	$705,601

[a]Includes approximately $20,000 cost reimbursement for preparing and administering interim performance objective tests in each school district.

[b]Cost-reimbursable basis settlement.

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The two educational firms that commented on our draft report stated that they had sustained high financial losses and injury to their reputations as a result of their participation in OEO's experiment. The firms expressed the opinion that the student achievement data did not provide an adequate basis for the conclusions published by OEO or for payment to the firms. The firms pointed out that because of the many operating difficulties, primarily insufficient startup time, the unsuitability of the tests selected by OEO, and poor testing conditions, they have not been equitably compensated by OEO's payment adjustments.

CHAPTER 7

CONCLUSIONS AND AGENCY COMMENTS

CONCLUSIONS

Because of a number of shortcomings in both the design and implementation of the experiment, the question as to the merits of performance contracting versus traditional educational methods still remains unanswered.

The impact of factors which were not under study but which have affected the outcome of the experimental programs could have been minimized if OEO had provided sufficient time to (1) develop a good experimental design, (2) implement the experiment in accordance with that design, and (3) properly acquaint and obtain the support of those individuals and groups that were critical to the successful conduct of the experiment.

The experimental design should also have been flexible enough to redirect or terminate further efforts when critical design criteria were not met during implementation. Moreover, the assignment of specific and clear responsibilities would have minimized the conflicting roles among program participants.

OEO's decision to proceed with the experiment in light of the many assumptions that had to be made to meet the short leadtime schedule proved to be extremely costly in terms of the objectives that were not met and the possible compromise to the integrity of OEO's overall conclusion.

As part of its overall assessment of the impact of the experiment, OEO initially intended to report the results of the experiment on a school-district-by-school-district basis by use of comparisons between the experimental and control programs and among the programs of the six educational firms. The experiment was designed to provide data for such an analysis. OEO did not report the results of the programs in this manner because it found no significant differences between the results of the majority of the programs and because it was unable to determine the cause of apparent successes and failures on an individual-school-district basis. Consequently, much of the data collected on this basis was of little or no use.

In addition, OEO's nonobservance of Federal Procurement Regulations and otherwise questionable actions involved in selecting contractors and administering and settling contracts indicated the existence of serious weaknesses in OEO's procurement practices.

If OEO had performed a cost analysis of the prospective contractors' proposals, that is, related the contractors' proposed costs to the tasks required in the request for proposals, OEO would have identified costs which were low in relation to the requirements and requirements for which no cost estimates were provided.

OEO should have explored the financial stability of all the educational firms before committing itself to large fund advances without any assurances that the firms could repay advances in excess of earnings at the end of the contract period. In the case of one firm, final settlement negotiations apparently resulted in a lessening of the uncollectible advances by increasing the proposed payments to that firm.

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The President's fiscal year 1974 budget contains no direct appropriations to OEO and provides for the transfer of certain OEO programs to other Federal agencies. Funds will be provided in the fiscal year 1974 budgets of these Federal agencies for continuing these programs. OEO's research and development activities in education will be transferred to the National Institute of Education, Department of Health, Education, and Welfare.

Because of the proposed discontinuation of funding of OEO as of June 30, 1973, we are not making any recommendations to OEO for future projects of this nature. We believe, however, that many of the observations and conclusions in this report will be of value to the Institute and local education authorities if similar experiments are funded in the future.

AGENCY COMMENTS

OEO's Acting First Assistant Director stated in his letter of April 6, 1973 (see app. I), that OEO's final report

in June 1972 contained a comprehensive analysis of the results of the experiment and that many of the problems pointed out in our report were appropriately noted in OEO's report. He stated further that OEO believes that its report provides a useful perspective within which the overall performance contracting experiment may be judged.

CHAPTER 8

SCOPE OF REVIEW

The objective of our review was to determine (1) whether the design of the experiment was such that the final results would be useful and appropriate for making decisions on the feasibility of performance contracting on an expanded basis and (2) whether the controls instituted and exercised by OEO over the various contracts were adequate to insure the validity of the results of the experiment.

Our review was made at OEO headquarters in Washington, D.C., and at the main offices of the test and analysis and management support contractors. We also visited 8 of the 18 school districts to observe the operations of the experimental instructional programs.

Our work included:

--Considering the findings reported by the OEO internal auditors and the scope and nature of their audit work performed at OEO headquarters and contractors' offices.

--Reviewing the applicable legislation; OEO and other contracting regulations; contracts and subcontracts; and reports, correspondence, and other records pertaining to the experiment.

--Interviewing officials of OEO, the test and analysis and management support contractors, the school districts, and the educational firms.

Two consultants in education assisted us:

1. Dr. Joseph Froomkin, a consultant from Washington, D.C. He was formerly with Office of Education, Department of Health, Education, and Welfare.

2. Dr. Stephen Klein, Director, Educational Evaluation Associates, Los Angeles, California.

EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON, D.C. 20506

OFFICE OF ECONOMIC
OPPORTUNITY

APR 6 1973

Mr. Morton E. Henig, Associate Director
United States General Accounting Office
Manpower and Welfare Division
Washington, D. C. 20548

Dear Mr. Henig:

Thank you for sending me the draft report on the Office of Economic Opportunity's Performance Contracting Experiment.

After careful consideration we have determined that most of the substance of your comments in the report which are significant were furnished to the GAO as early as 1971 and were published in OEO's final report on the experiment in June 1972 (OEO Pamphlet 3400-6). The OEO final report contained a comprehensive analysis of the results, with appropriate notes about applicable statistical and methodological problems, and lengthy papers on significant testing, cost and contractual issues. In addition, to provide a complete view of the experiment, OEO included statements by the school district representatives and four of the six participating educational technology companies. The GAO draft fails to take cognizance of the material in the OEO report and adds little that would help assess the validity of the experimental findings.

The draft is devoid of any reasonably constructive tone in the discussion of its findings. Despite its extensive criticism of OEO's procedures, GAO did not make any recommendations for the future conduct of projects. We believe the reluctance of GAO to make any recommendations based upon its findings obscures both the character of the underlying events and the complex nature of their remedy. Since a primary purpose of an agency review of a GAO draft is to consider utilization of the recommendations, it is difficult to realize this benefit in this case. As stated in your report, this omission was based on the grounds that OEO as an agency will cease to exist after June 30, 1973. Apparently, your agency didnot take into account that OEO's research functions will be transferred to other Federal agencies and officials there would presumably benefit from any such recommendations.

It is our expectation that GAO will include in its final report, in addition to this letter, a copy of the previously mentioned OEO final

report (copy attached).[1] We believe this report replies adequately to the problems noted in the GAO draft and provides a useful perspective within which the overall experimental effort may be judged. Also, we are attaching for inclusion the view of another authority, Dr. Ellis Page of the University of Connecticut, who calls the experiment possibly the most impressive ever conducted in education.[2]

[See GAO note 3.]

Sincerely yours,

Alvin J. Arnett
Acting
First Assistant Director

Enclosures

GAO notes:

[1]Copy not attached. Copies may be obtained for $3.00 from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151 (An Experiment in Performance Contracting, PB206793, June 1972).

[2]Copy not attached. See Ellis B. Page, "How We All Failed at Performance Contracting," Phi Delta Kappan, (October 1972). For an example of an opposing view, see John K. Miller, "Not Performance Contracting But the OEO Experiment Was a Failure," Phi Delta Kappan, (February 1973).

[3]Material deleted pertains to comments on matters that did not concern the contents of this report.

CONTRACTORS AND CONTRACT AMOUNTS

Contractors	Initial contract amounts	Projected total costs
SCHOOL DISTRICTS:		
Taft Independent School District Taft, Texas	$ 90,751	$ 86,074
Hartford School District Hartford, Connecticut	140,573	144,779
Grand Rapids Public Schools Grand Rapids, Michigan	142,364	144,074
Duval County School Board Jacksonville, Florida	54,300	[a]49,850
Hammond City School District Hammond, Indiana	54,528	[a]59,728
Bronx School District No. 9 Bronx, New York	53,796	57,721
Dallas Independent School District Dallas, Texas	47,417	42,973
School Administrative District No. 5 Rockland, Maine	47,211	49,070
Anchorage Borough School District Anchorage, Alaska	81,832	[a]79,851
Clarke County School District Athens, Georgia	58,970	[a]62,921
McNairy County School District Selmer, Tennessee	44,191	[a]44,942
Unified School District No. 259 Wichita, Kansas	51,900	[a]51,500
Seattle School District Seattle, Washington	60,000	55,715
Portland School District Portland, Maine	44,184	48,868
McComb Separate School District McComb, Mississippi	39,885	[a]41,751
Fresno City Unified School District Fresno, California	59,015	[a]60,637
Clark County School District Las Vegas, Nevada	58,744	[a]61,525
The School District of Philadelphia Philadelphia, Pennsylvania	56,291	50,842
Total	1,186,052	1,192,821
EDUCATIONAL FIRMS:		
A	513,000	310,635
B	864,000	[a]705,601
C	776,200	550,547
D	726,300	[a]602,384
E	771,000	523,712
F	720,000	[a]406,163
Total	4,370,500	3,099,042
MANAGEMENT SUPPORT CONTRACTOR	526,419	547,419
TEST AND ANALYSIS CONTRACTOR	614,346	1,082,153
PAYMENT COMPUTATION CONTRACTOR	13,000	[a]26,000
Total	$6,710,317	$5,947,435

[a]Indicates final payments.

APPENDIX III

SCHEDULE COMPARING EDUCATIONAL FIRMS' EARNINGS

BASED ON ACTUAL STUDENT ACHIEVEMENT AS MEASURED

BY PRETESTS AND POSTTESTS WITH MAXIMUM EARNABLE AMOUNT

UNDER CONTRACT

Educational firms and school districts	Maximum earnable amount based on pretests and posttests	Earnings based on actual student achievement	Percent of earnings to maximum
FIRM A:			
Taft Independent School District Taft, Texas	$ 114,750	$ 44,691	38.9
Hartford School District Hartford, Connecticut	135,000	45,569	33.8
Grand Rapids Public Schools Grand Rapids, Michigan	135,000	36,742	27.2
Total	384,750	127,002	33.0
FIRM B:			
Duval County School Board Jacksonville, Florida	216,000	74,192	34.3
Hammond City School District Hammond, Indiana	216,000	76,769	35.5
Bronx School District No. 9 Bronx, New York	216,000	73,291	33.9
Total	648,000	224,252	34.6
FIRM C:			
Dallas Independent School District Dallas, Texas	189,000	36,176	19.1
School Administrative District No. 5 Rockland, Maine	189,000	81,148	42.9
Anchorage Borough School District Anchorage, Alaska	204,150	77,641	38.0
Total	582,150	194,965	33.5
FIRM D:			
Clarke County School District Athens, Georgia	181,575	66,413	36.6
McNairy County School District Selmer, Tennessee	181,575	101,217	55.7
Unified School District No. 259 Wichita, Kansas	181,575	50,843	28.0
Total	544,725	218,473	40.1
FIRM E:			
Seattle School District Seattle, Washington	212,850	64,508	30.3
Portland School District Portland, Maine	198,000	78,288	39.5
McComb Separate School District McComb, Mississippi	167,400	51,816	31.0
Total	578,250	194,612	33.6
FIRM F:			
Fresno City Unified School District Fresno, California	180,000	38,330	21.3
Clark County School District Las Vegas, Nevada	180,000	53,141	29.5
The School District of Philadelphia Philadelphia, Pennsylvania	180,000	34,995	19.4
Total	540,000	126,466	23.4
Total	$3,277,875	$1,085,770	33.1

ACTUAL AVERAGE STUDENT ATTENDANCE BY SCHOOL DISTRICT

School district	Average attendance in days for full-time students
McNairy County School District Selmer, Tennessee	142.1
Dallas Independent School District Dallas, Texas	142.3
Clark County School District Las Vegas, Nevada	141.9
Anchorage Borough School District Anchorage, Alaska	142.3
Clarke County School District Athens, Georgia	125.5
Unified School District No. 259 Wichita, Kansas	144.8
Taft Independent School District Taft, Texas	144.1
McComb Separate School District McComb, Mississippi	135.6
Seattle School District Seattle, Washington	141.8
Grand Rapids Public Schools Grand Rapids, Michigan	152.2
Hartford School District Hartford, Connecticut	111.8
Duval County School Board Jacksonville, Florida	145.7

APPENDIX IV

School district	Average attendance in days for full-time students
School Administrative District No. 5 Rockland, Maine	145.2
Hammond City School District Hammond, Indiana	134.2
Portland School District Portland, Maine	133.9
Fresno City Unified School District Fresno, California	141.5
The School District of Philadelphia Philadelphia, Pennsylvania	148.1
Bronx School District No. 9 Bronx, New York	118.0

SCHEDULE COMPARING EDUCATIONAL FIRMS' ADJUSTED EARNINGS WITH EARNINGS BASED ON ACTUAL STUDENT ACHIEVEMENT AS MEASURED BY PRETESTS AND POSTTESTS

Educational firms and school districts	Earnings based on actual student achievement	Earnings based on adjusted student achievement	Percent of increase of adjustment
FIRM A:			
Taft Independent School District, Taft, Texas	$ 44,691	$ 60,768	36.0
Hartford School District, Hartford, Connecticut	45,569	82,743	80.5
Grand Rapids Public Schools, Grand Rapids, Michigan	36,742	52,061	41.7
Total	127,002	195,072	53.6
FIRM B:			
Duval County School Board, Jacksonville, Florida	74,192	113,681	53.2
Hammond City School District, Hammond, Indiana	76,769	153,297	99.7
Bronx School District No. 9, Bronx, New York	73,291	132,069	80.2
Total	224,252	399,047	77.9
FIRM C:			
Dallas Independent School District, Dallas, Texas	36,176	67,618	86.9
School Administrative District No. 5, Rockland, Maine	81,148	138,651	70.9
Anchorage Borough School District, Anchorage, Alaska	77,641	142,720	83.8
Total	194,965	348,989	79.0
FIRM D:			
Clarke County School District, Athens, Georgia	66,413	133,796	101.5
McNairy County School District, Selmer, Tennessee	101,217	195,583	93.2
Unified School District No. 259, Wichita, Kansas	50,843	96,278	89.4
Total	218,473	425,657	94.8
FIRM E:			
Seattle School District, Seattle, Washington	64,508	110,842	71.8
Portland School District, Portland, Maine	78,288	134,775	72.2
McComb Separate School District, McComb, Mississippi	51,816	94,256	82.0
Total	194,612	339,873	74.6
FIRM F:			
Fresno City Unified School District, Fresno, California	38,330	70,613	84.2
Clark County School District, Las Vegas, Nevada	53,141	88,216	66.0
The School District of Philadelphia, Philadelphia, Pennsylvania	34,995	63,294	80.9
Total	126,466	222,123	75.6
Total	$1,085,770	$1,930,761	77.8

APPENDIX VI

SCHEDULE COMPARING EDUCATIONAL FIRMS'
EARNINGS BASED ON STUDENT ACHIEVEMENT
AS MEASURED BY INTERIM PERFORMANCE
OBJECTIVE TESTS WITH MAXIMUM EARNABLE AMOUNT
UNDER CONTRACT

Educational firms and school districts	Maximum earnable amount based on interim performance objective tests	Earnings based on test results	Percent of earnings to maximum
FIRM A:			
Taft Independent School District Taft, Texas	$ 38,250	$ 26,100	68.2
Hartford School District Hartford, Connecticut	45,000	26,922	59.8
Grand Rapids Public Schools Grand Rapids, Michigan	45,000	28,956	64.3
Total	128,250	81,978	63.9
FIRM B:			
Duval County School Board Jacksonville, Florida	72,000	57,994	80.5
Hammond City School District Hammond, Indiana	72,000	53,879	74.8
Bronx School District No. 9 Bronx, New York	72,000	48,688	67.6
Total	216,000	160,561	74.3
FIRM C:			
Dallas Independent School District Dallas, Texas	63,000	56,698	90.0
School Administrative District No. 5 Rockland, Maine	63,000	54,681	86.8
Anchorage Borough School District Anchorage, Alaska	68,050	56,593	83.2
Total	194,050	167,972	86.6
FIRM D:			
Clarke County School District Athens, Georgia	60,525	52,102	86.1
McNairy County School District Selmer, Tennessee	60,525	46,517	76.9
Unified School District No. 259 Wichita, Kansas	60,525	45,572	75.3
Total	181,575	144,191	79.4
FIRM E:			
Seattle School District Seattle, Washington	70,950	54,843	77.3
Portland School District Portland, Maine	66,000	50,511	76.5
McComb Separate School District McComb, Mississippi	55,800	44,900	80.5
Total	192,750	150,254	78.0
FIRM F:			
Fresno City Unified School District Fresno, California	60,000	31,335	52.2
Clark County School District Las Vegas, Nevada	60,000	39,051	65.1
The School District of Philadelphia Philadelphia, Pennsylvania	60,000	19,446	32.4
Total	180,000	89,832	49.9
Total	$1,092,625	$794,788	72.7

APPENDIX VII

PRINCIPAL OFFICIALS OF THE OFFICE OF ECONOMIC OPPORTUNITY RESPONSIBLE FOR ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
DIRECTOR:		
Howard Phillips (acting)	Jan. 1973	Present
Phillip V. Sanchez	Sept. 1971	Jan. 1973
Frank C. Carlucci	Dec. 1970	Sept. 1971
Donald Rumsfeld	May 1969	Dec. 1970
Bertrand M. Harding (acting)	Mar. 1968	May 1969
R. Sargent Shriver	Oct. 1964	Mar. 1968
DEPUTY DIRECTOR:		
Bert A. Gallegos (acting)	Feb. 1973	Present
Wesley. L. Hjornevik	Oct. 1969	Jan. 1973
Robert Perrin (acting)	Mar. 1968	Oct. 1969
Bertrand M. Harding	June 1966	Mar. 1968
ASSOCIATE DIRECTOR FOR ADMINISTRATION (note a):		
Thomas Wolf (acting)	Mar. 1973	Present
J. Laurence McCarty (acting)	Feb. 1973	Mar. 1973
Ernest Russell	Apr. 1971	Feb. 1973
Robert C. Cassidy	Sept. 1967	Apr. 1971
ASSISTANT DIRECTOR FOR PLANNING, RESEARCH, AND EVALUATION (note b):		
Dr. Brad Hainsworth (acting)	Feb. 1973	Present
Wesley L. Hjornevik (acting)	Oct. 1972	Jan. 1973
Thomas K. Glennan, Jr.	July 1972	Oct. 1972
John O. Wilson	Oct. 1969	July 1972
Richard Ottman (acting)	Jan. 1969	Sept. 1969
Robert A. Levine	Nov. 1966	Jan. 1969

APPENDIX VII

[a]The Office of Administration was called Office of Management until June 1968.

[b]Prior to OEO's September 1969 reorganization, this office was called the Office of Research, Plans, Programs and Evaluation.

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